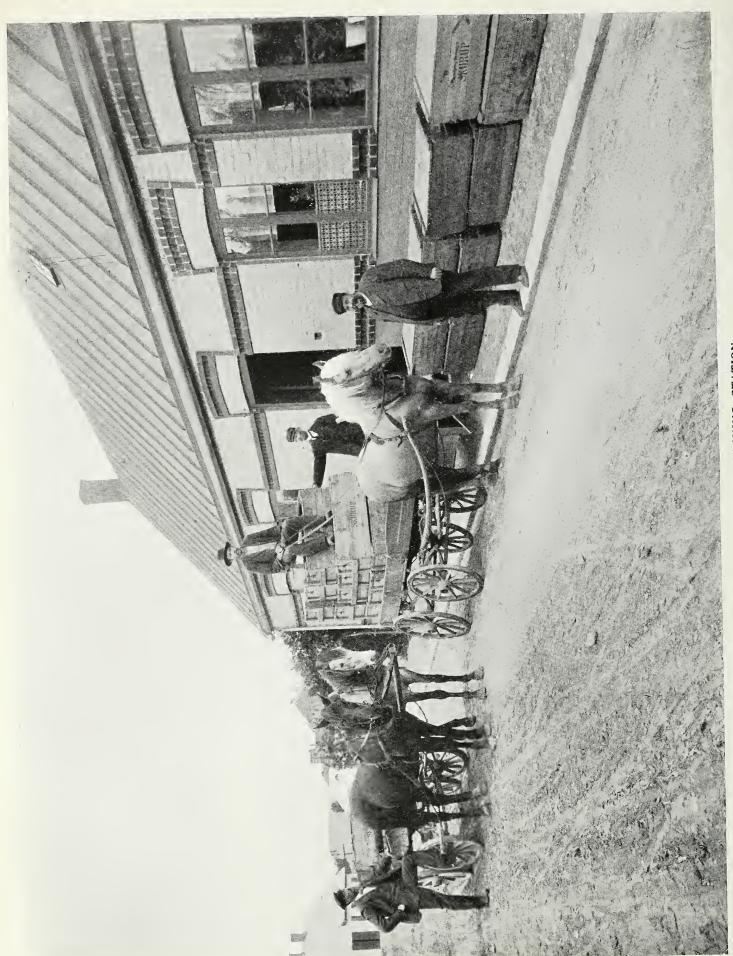
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A SCANDINAVIAN EGG-PACKING STATION.
In Denmark and Sweden eggs are collected at Sub-Depots, as illustrated in our issue of October, 1908 (page 47) whence they are sent to the Packing Stations, one of which, at Skurup, Sweden, is here shown.



VOL. 1.—No. 8.

May 1, 1909.

Monthly Sixpence Net.

# DIARY OF THE MONTH.

### EDITORIAL NOTICES.

Telegrams: "CHICKENDOM." Telephone: 1999 P.O.CITY.

The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs, or sketches, and publication in THE ILLUSTRATED POULTRY RECORD can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. All rights of reproduction and translation are reserved.

The Editor will be glad to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering

such queries is made.

The Annual Subscription to THE ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to Brown, Dobson, and Co., Limited.

THE ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate inimediately with the Editor. The latest date for receiving advertisements is the 20th of the month preceding date of issue.

The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser he is requested to communicate at once with the Editor.

The Six Months' Laying Competition.

The general results obtained from the competition at Street, which concluded on March 31, are dealt with by Mr. A. Newport in our present issue, but there are a few points which call for special recognition. First and foremost is the manner in which the work has been carried out by Mr. W. Reynolds and his helpers, who will be accorded the most unqualified thanks and praise for the careful and efficient conduct of the competition, and for the promptitude and completeness with which the results have been announced. Such are beyond all praise, and the poultry industry, as a whole, is greatly indebted to them for their indefatigable and successful labours. Few are able to realise what these labours have been. For six months there has been no cessation. The recording alone of eggs laid, food cost. and the multitudinous data shown in the report involved a vast amount of continuous labour when the large number of birds included is taken into account. Out of one hundred pens entered. only five lots were withdrawn. During the competition fourteen birds died, only a percentage of 2:33, which is small considering that practically all were drawn from other parts of the country, and that probably many had been forced during the growing stage to attain early maturity. Generally speaking, the health record is excellent. if we except the four unaccountable outbreaks during the month of February. It may be hoped that if any evidence has been obtained with respect to these the particulars will be published, as they may be very valuable. It is too early to expect the full balance-sheet of the competition, but that will be interesting; not that we anticipate it will be any indication as to whether poultry-farming can be made profitable on these

lines. Necessarily, it is non-economic, and it is desirable that the question of egg-production for a special purpose should be kept distinct from ordinary keeping of fowls. In such questions the cost of production must be taken into account as well as the results achieved. But in every sense the Street competition must be regarded as an unqualified success.

### Triumph of the General Purpose Breeds.

Apart from the satisfaction that Mr. E. W. Richardson, late secretary of the Utility Poultry Club, and manager of the Twelve Months' Competition, which was concluded in September last, has won the first place with his Buff Rocks, which will be a consolation in his severe illness, the fact stands out that for winter egg-production we must look to the General Purpose breed rather than the non-sitters. The urgent necessity of increasing the output from October to February becomes more pressing every year. That it can be done, this competition abundantly The first twelve lots are all of the heavier races, of which the first were Buff Rocks; second, third, and fourth Buff Orpingtons; fifth, eighth, ninth, tenth, and twelfth White Wyandottes; and sixth, seventh, and eleventh White Orpingtons. It is not until the thirteenth lot is reached that we find non-sitters—namely, Black Generally speaking, it may Leghorns. admitted that the non-sitters will give greater average total over the entire year, but the pressing question is enhanced production during the months when supplies are deficient and prices range highest. In so far as this competition will show the possibilities of greater laying in the winter months, and encourage efforts in that direction, it is evident that for the accomplishment of this purpose General Purpose breeds are to be preferred, but of the best kinds, both as to race and strain. In America the White Leghorn is regarded as supreme, and in Australian competitions has attained a high position, but at Street the results were unsatisfactory in the extreme.

#### The Price of Foodstuffs.

What with the shortage in the world's wheat crops and the operations of American speculators, poultry-keepers are faced with a considerable addition to the cost of feeding, and the situation is the more serious because, whilst the miller and baker can raise and lower the price of their produce as the value of raw material fluctuates, the poultry-breeder and egg-producer are entirely at the mercy of the markets. The rise in the price of wheat coincides with the spring reduction in the value of eggs, and we are afraid there is nothing for it but to wait patiently until the speculators have played their hands, or a new and

generous crop automatically brings down the price. At the time of writing wheat has gone up 4s. per quarter in a few days, and the general verdict is that further substantial rises are to follow, so that by the time this appears the value of wheat may be well above the high-water mark for the last quarter of a century. Unfortunately for the poultry-keeper, it is not wheat alone that is affected. If that were the case it would not be a difficult matter to find substitutes; but when wheat goes up other grains, meals, and feeding stuffs go up as a natural consequence, and the poultry-breeder is left with no alternative but to pay the advanced prices or buy inferior stuff, and the latter course is not to be recommended on any consideration. The situation affects all classes of poultry-keepers, but there can be no doubt that the hardship is felt most severely by the general body of market producers, and for their sakes it is to be hoped that food values will soon be restored to the normal

### Scottish Poultry Committee.

The Departmental Committee on Poultry-Breeding in Scotland, appointed last July by Lord Pentland, Secretary of State, has now completed its task, and the report is in the press, together with the evidence taken. Probably it will be issued by the time the ILLUSTRATED POULTRY RECORD is published, too late, however, to be reviewed this month, but we hope to deal with it fully in the June number. The committee, during the course of its inquiry, has visited the whole of North Britain, lowlands as well as highlands, and has obtained a mass of information respecting the poultry industry, the completeness of which has never before been equalled by any country. This will, we believe, show the vast opportunities presenting themselves, and, it may be hoped, will lead to the adoption of more progressive methods than have prevailed as to production and marketing in Scotland, where the need for marked changes is very great, as advance in this branch of agriculture has been much slower than in England and Ireland. We understand that the recommendations of the committee cover the entire field, dealing with education, production, marketing, and Governmental aid, and that proposals are made which, when carried out, as the appointment of such a committee should mean they will be, will profoundly affect the poultry industry of Scotland in the near future. With the cordial co-operation of central authorities, county councils, agricultural and other societies, and the agricultural population, this report should inaugurate a new era for Scottish poultry-keeping. To that end, however, it is essential that the importance of the question shall be fully recognised by those who

have heretofore regarded poultry as merely a by product. We are glad to know that those members of the committee who are general agriculturists have been fully awakened to the fact that poultry- and egg-production can be made to contribute as much to the rural regeneration and prosperity of Scotland as it has done in South Britain and Ireland.

# The Incorporated Society for the Destruction of Vermin.

At the first annual meeting of this Society, held at 20, Hanover-square on March 25, under the presidency of Sir James Crichton-Browne, the

report of the executive committee, read by Dr. Cantlie, gave evidence of useful work having been done in collecting a vast amount of information respecting the damage done and the loss sustained through the agency of vermin, and more particularly of rats and mice. All classes of the community were addressed by schedules, and from the replies received it would appear that £15,000,000

estimate of the annual loss incurred in England and Wales from rats alone. A poultry-fancier affirmed that he had suffered to the extent of £80 in one year, and his experience must be shared by many others, for spoiled sittings, chickens destroyed, and raids on the storeroom illustrate some of the ways by which the poultry industry suffers. The means at our command of destroying rats cannot be said to be efficient. The new viruses raised hope, but many of these are unsatisfactory, and some would even seem to be dangerous, as likely to be the means of tainting human food by the partially poisoned rats. It is certain that there

are inert or dangerous viruses before the public. If, therefore, the Society can bring sufficient influence to bear upon Government authorities to induce them to insist upon a proper test of these substances, permitting only those that are genuine to be issued to the public, it will do a great service. Meanwhile its efforts in other directions, and especially its plea for united action against a common enemy, is deserving of support from all sections of the poultry industry.

### A Cheap Shelter.

The photograph shows a cheap and ingenious way of providing scratching accommodation for



 $[Copyright. \ \ ]$ 

A CHEAP AND EFFECTIVE METHOD OF PROVIDING SHELTER FOR POULTRY, DESCRIBED IN THE NOTE ABOVE.

poultry, or a warm and sheltered place in which to put the coops containing the early broods of the season. The floor is made of old railway sleepers littered over with straw, and the sides and roof are of thatched hurdles secured to a few stout stakes driven into the ground. The heap of furze lying in front is, of course, accidental, as it cuts off some of the sunshine, and would not be there when the shelter was in use.

## Poultry-Breeders and Foreign Trade.

Not before time has our Government awakened to the importance of abandoning the old *laissez* 

faire policy in respect to the encouragement of foreign trade—a policy which afforded great advantages to our friendly rivals in other countries. The appointment of a highly influential and representative Royal Commission for the Brussels, Rome, and Turin Exhibitions is an indication that a new spirit has been infused into our central authorities. Hitherto Government assistance has been superficial in the extreme. stated by the Prince of Wales, in his speech at the first meeting of the Commission at Marlborough House, "in the past British exhibitors have been at a disadvantage compared with those of other countries owing to the lack of any permanent machinery for collecting and preserving information with regard to exhibitions, and for organising and managing the British Section at exhibitions in which His Majesty's Government might decide to take part officially." This has been only too apparent, and the promise that in the future this want of system will be rectified is very welcome. But such efforts must not be restricted to the great industries, otherwise much of the benefit will be missed. They are only too apt to absorb everything. Regarding the poultry industry, there can be no question that British breeders have lost heavily owing to the want of the support afforded by foreign Governments to their people.

### Negligible British Exhibits.

At the great international poultry exhibitions held within recent years at St. Petersburg, Madrid, and Rome, to say nothing of general agricultural fixtures in other countries, the representations of breeds of poultry and appliances from the United Kingdom were almost comtemptible as compared with those from France, Belgium, and Germany, although in sections accredited to those countries large numbers of English breeds and English-bred birds were included. The explanation was that the Governments of each of those countries made grants towards the expenses, appointing Commissioners to secure a representative display and to look after the interests of exhibitors at the respective shows. Moreover, special catalogues in various languages were issued and disseminated with brief descriptions of the races of poultry included. result was a large accession of trade, whilst our breeders, having no such help, were left entirely in the rear.

### The Poultry Industry in Germany.

Hitherto comparatively little has been published respecting the poultry industry in Germany, except that the consumption of eggs and poultry was increasing more rapidly than the production.

An interesting article, however, in the current issue of the Journal of the Board of Agriculture shows that Germany is making marked progress, thus keeping in line with the rest of the civilised world. Recently the German Agricultural Society has conducted an exhaustive inquiry, and summarises the steps taken to promote this industry. One important point is the amount of support given by the various authorities for encouragement of this branch. In 1907 no less a sum than £7,900 was spent in grants for more or less definite subjects distributed through the Agricultural Chambers and Central Agricultural Societies. The methods adopted vary in the different States. Of the utmost importance are the poultry-breeding stations, of which there are no fewer than 2,995, the main object of which is the production and dissemination of pure-bred fowls specially adapted to the district, with a view to raising the standard of the poultry kept by the ordinary farmer. This is done by distribution of either eggs or chickens. There are also poultrybreeding centres, which are on a larger scale, and are really model poultry-farms, where instruction is given and experimental work carried on. The article in question gives particulars of several of these. Other forms of assistance are provided by means of lectures, prizes, &c.

### The Month of Promise.

All who are closely connected with poultry production for market begin to feel much more hopeful with the approach and advent of May, and although anticipation is sometimes out of proportion to the realisation, there is some justification for regarding May as the month of promise; and it is better to be cheerful in anticipation than to be without ambition of success. May means much from the point of view of the London caterer. Entertainments increase and multiply, natives and visitors fill the metropolis, and demand increases—usually out of all proportion to the average rate of supply, so that it is but a faint-hearted poultry-breeder who does not look to May as at least the commencement of "a good time coming." There may be more or less of disappointment, lack of continuity, or failure of maintenance; nevertheless, May is a month of promise, and as such is welcome after the lean, dark days of winter. The best part of the season is of altogether too short duration to suit the general convenience of the bulk of our producers, and as week succeeds week in rapid succession, increasing efforts are necessary to ensure the marketing of every marketable bird without undue delay. Backward broods must be pushed along, as only experienced feeders know how, and to size must be added condition, and to condition, finish.

# LAYING COMPETITIONS.

## THEIR USES AND POSSIBILITIES.

BY MISS GALBRAITH.

m WE have travelled a long way from the starting-point of the original promoters of laying competitions. In the days gone by competitions were held with the simple and very sensible object of finding out which of the members of a particular club possessed the best laying strains, and of publishing the information when obtained. But the clearing of the ground has opened up a vista full of wide possibilities. To know the best laying strains, even to purchase of the best, by no means solves the whole riddle of how to make poultry pay. The remarkable discovery that poultry requires as much attention as the rest of the farm stock has not been hailed with glee by the British farmer, but he is gradually being brought to the swallowing of this bitter pill. There are, however, a great many other points that have required consideration, and we are only slowly feeling our way out of the darkness of ignorant guess-work into the regions of clear experiment, undertaken with conscious aim. To the man in the street laying competitions are, and will probably always remain, mere hen races; the only thing his dramatic instinct sees in them is—figures. But the man in the street is not a very valuable assistant in agricultural matters, and we can afford to look upon his love of sensation and record-breaking as a side issue.

"The main object of an egg-laying competition is educational" are the words with which the Australian Government report opens, and only those who have tried it know what a Herculean task the educating of the British farmer is in poultry matters. The subject of poultry economics, however, is a large one, and quite unexpected developments have taken place, so that many have discovered that here, as always, "a little learning is a dangerous thing," and there is still much to learn before results can be imparted to the agricultural masses. To "boom" a new breed or strain that does well one year under certain conditions may lead to the undoing of those who launch out with it under totally different conditions, being of the opinion that the

best layers in one place must needs give the best results all over the country. The first step forward was when it was discovered that good laying was a matter of strain rather than breed. This led unobservant minds to the belief that any bird of any good strain would lay well anywhere in winter, and disappointments and failures innumerable came to light. Then the trap-nest demonstrated that in the best strains there were ne'er-do-wells, and this was a "poser" that led many to give up the problem as insoluble, and to look upon the purchase of birds as a pure lottery transaction in which they were as likely as not to draw a blank. Breeders themselves could give no better guarantee than that their untested pullets might or might not prove good layers. Theories of selection by external characters have generally proved more or less uncertain, chiefly because, even when they are founded on close observation, it is a difficult matter to endow all mankind with the powers of sight and hearing needful to detect the signs which cannot always be easily described in words.

A recognition of the laws of heredity may prove to be another step forward, but that is still too little understood to count at present as a factor in the general advance towards greater certainty of results. But that laying propensities are inherited in quite definite proportions I am convinced from experiment, and only the use of the trap-nest can disclose these proportions with certainty. To take the total number of eggs laid by four or six birds as indicative of the average of each is entirely misleading, and may bring about the setting of the eggs and the perpetuating of the qualities of a thoroughly bad layer. For the presence of a single record-breaker may keep the number so high that the average may seem to preclude the possibility of a really bad layer. From a pen of eleven birds I have known an average of nine eggs daily for three months, yet an accident disclosed the fact that one of these birds had scarcely ever laid an egg. She did not lay fifty in her first year, while one of the others laid 230, but only the trap-nest would have shown this under ordinary circumstances. To breed from the whole pen, even when it consists of but four pullets, may be fatal to good results, for the bad layer lays nearly all her eggs during the breeding season, and they would inevitably be set with the others. A laying competition therefore without trap-nests, while useful in some ways, leaves the breeder altogether in the dark as to the real value of his birds. The labour of trapping

thoroughly understood, it

is generally

possible to re-

call similar

situations and find out what

breed thrives

best there. And

here laying

competitions

might assist if they could be

held in many

places, with as

much diversity of climate, soil,

as possible, the

records being

compared with

the results of

poultry farmers

living in the

competition is of little use as

a test of the

real powers

of a strain. Although

laying com-

petitions only

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and

situation

and recording is enormous, but it is necessary until such time as breeders discover a system by which they can make heavy laying a fixed and reliable quality. When methods of breeding are followed that will make good laying as certain as good beef or great speed in cattle and horses, then it may be that the trap-nest will be superannuated, but we appear to be still far distant from that elusive goal in this country.

There are two points in particular to which the laying competitions, especially that of the two last winters (four months), have drawn our attention;

one is the uncertainty surrounding meaning of the word "strain," and, indeed, the whole subject breeding, of and the other is the value of acclimatisation. On the first point an inevoked quiry many conflicting replies, the most noticeable thing being diversity of opinion as to what constitutes a strain. This is a question that will have to be set at rest if any good purpose is to be served by publishing the names of winners of competitions. As used at present, the phrase is worse

than meaningless; it is fraught with misleading information, though this may be quite unintentional on the part of those who use it.

The question of acclimatisation is one well Opposed to those who believe worth attention. that any good strain will lay well anywhere are those who believe that certain breeds are suited to certain types of land. This is true enough, but one must go further. It is not enough to say that the heavy breeds, or the yellow-legged breeds, are most suitable for clay or wet land. One must find the fowl for the particular district. As an example, a lady informed me that her Buff Orpingtons laid much better than her

White Wyandottes on a heavy clay soil, while birds from the same pens, also on clay land, twentyfour miles distant, invariably reversed matters, the Wyandottes far outstripping the Orpingtons. It seems strange that practical men have been so long in recognising that what applies, for instance, to sheep also applies to poultry. It is well known that sheep will not give best results unless the breed suits the district, and some breeders have found it necessary to make a new breed to suit local conditions. The same may be done with When local peculiarities of climate are

[Cot vright.

THE TYPE OF HOUSE USED IN THE STREET LAYING COMPETITION.

the winter egg is thought of, yet for the utility poultry-keeper the questions of hardiness and ease in rearing have to be considered, as well as the general results over the whole span of the bird's life. The laying competitions at Bagshot, held alongside of birds that had been especially bred to meet the requirements of a trying situation (using as a foundation of the breed one known to suit similar soil and climatic conditions elsewhere), showed clearly the value of complete acclimatisation. It was not merely a question of better laying; the difference was noticeable in the fact that while the frequent sudden

changes of weather, especially of temperature, upset the strangers, causing an almost complete cessation of eggs for two or three days at a time, the home birds of this breed were little affected, save by the densest fog. The average farm has anything but ideal conditions, and it is needful to find out by careful tests what can be done under all.

To be reliable guides, the competitions would require to be continued for two years and be repeated frequently in the same districts, for it is surprising how completely one year may differ from another in climatic conditions. The short winter test may popularise a breed that leaves too narrow a profit for the farmer who keeps the birds chiefly or solely for eggs and table. The four months' competition fails to bring out what these birds will do in the summer and early autumn, and to the farmer with contracts to fulfil (and who has not?) the winter layer may prove a costly delusion, if one of the heavy breeds should happen to distinguish itself for a few months. From the educational point of view much might be learned by the competitors themselves could they visit the competitions and compare the birds on the spot. To show how difficult a thing it is to judge young birds, I would mention one pen in last winter's competition which was pronounced by very competent practical men to be "no good at all," and curtly dismissed with some such remark as "they will never do anything." Small in size, poor in type, young in age, the only point in their favour was their colour, for it was of the rich metallic sheen that indicates vitality, and hence good laying. This point was overlooked by all. When these birds began to lay they proved to be quite the best in the competition, although not prize-winners, owing to their youthfulness having prevented an early start. Again, there were some that so obviously belonged to the "beefproducer" type that poor laying was a foregone conclusion. I can imagine no more useful lesson for a set of students than a careful study of such pens, with a subsequent watching of records, and later observation of the birds when more matured, for it is surprising how great is the difference of type between birds of different yards, even when they are nominally of the same strain.

Here, then, are some points that await fuller elucidation before we can get the most useful results from the competitions: What is meant by the word strain? What systems of breeding are best to produce greater certainty of results among the progeny of the best laying strains? Is it possible by a series of tests in all districts to discover which breeds, as well as which strains, are best suited to the varying conditions of soil and situation found on farms generally throughout the country?

# HOW I SHOULD RUN A LAYING COMPETITION.

By A. T. JOHNSON.

AVING had repeated requests from various sources for information regarding the possibilities of making egg-production a profitable industry, and feeling that the present method of running laying competitions, with which eggproduction is now so closely concerned, is not one that can be adopted by the ordinary utility poultry-keeper with any hope of profit, I do not think any explanation need be expected from me as to the wisdom of again opening this subject. But let it be distinctly understood that in here setting forth some of my views I do not desire to try and influence the prevailing ideas as to what laying competitions should or should not do, except in one particular, which, briefly, is this. Granted that our farmers, as a class, are the people to whom we must look for the great bulk of our egg supply, and that they are sorely in need of encouragement in the form of some convincing object-lesson as regards the profitableness of keeping laying hens, then I say that the present plan of conducting laying competitions is, so far as the general farming class is concerned, a wrong one. The competitions are wrong, from the point of view I adopt, because they cannot be run at a profit; because the hens (and indirectly their owners) do not get what they should out of the land, and because the land (and, again, its owner) does not derive the benefits which it should obtain from the hens. am quite prepared to grant that the laying competitions have done good in a general way, but most of all have they been a blessing to the specialist in laying strains. They began by creating him first of all, and concluded by making a new industry and a new market and source of And, although I do not myself livelihood. believe in excessive breeding for any object, I would not desire to see these competitions abandoned. They are interesting and instructive in many ways, but they only affect the specialist in laying strains to any appreciable extent, and are as much a part of his kit as a show is part of a fancier's life and work. Both the one and the other must win prizes so as to "sell their stuff" and keep general interest affoat.

To the farmer, however, these laying competitions only (and rightly, perhaps) warn him of the dangers of meddling with utility layers on the lines they adopt. They show him how not to run poultry for profit. It is probable that the promoters of these matches never intended that the latter should concern the farmer at all, beyond indirectly giving him the off-chance of buying line-bred layers. If so, well and good.

But I maintain that the time has come when some effort should be made, either by the U.P.C. or other enterprise, so to run a laying competition, or test I prefer to call it, that farmers in general would glean directly encouraging and useful lessons therefrom. It should be carried out on the colony plan, and conducted by a farmer who has a knowledge of poultry, and who would be able to prove to others of his calling the possibility of making layers pay. Such a competition would be an object-lesson for all whom it might concern, and I contend that it would, if properly managed, do more for our natural egg-production than all the other occupations have ever done. I am quite awake to all the difficulties of such a scheme, and feel that while the accuracy recorded by the trap-nest, plus the limited range, may be impossible on the colony plan, the aggregate yield of, say, 100 hens spread over forty or fifty acres for twelve months would prove to be a tolerably fair one.

In running a trial-laying competition on the colony plan, one would naturally refrain from being too ambitious. I would suggest that the number of layers entered be limited to 100, and that each competitor's flock consists of ten birds and a cock. An entrance fee of not less than 10s. or more than 20s. would be charged, and any breed, variety, or cross-breed, would be permitted. Supposing the competition to begin on October 1, all birds of the previous spring's hatching would have to be mated with an eighteenmonths-old cock, and hens in their second year to a cockerel of nine or ten months. The object in having the cocks is two-fold. In the first place, a sale of eggs for hatching could be made in the spring, and the presence of the male birds would help towards keeping each flock within its own area. The whole of the business connected with the sale of eggs would be in the hands of the manager, who would also pay for all food, and make what he could out of the competition. I would give him full control of feeding, &c., but he would be expected to publish an epitome of his system before the competition began and to issue monthly reports. Any members of a management committee would be permitted access to the farm at any time. Seeing that he would not have his own choice of layers and yet be responsible for loss, and with the knowledge that a first year at such work is not usually so successful as succeeding years, he would be allowed one-half, or two-thirds, of the entry fees, but no other remuneration whatever beyond what he could make by the sale of eggs. Prizes and expenses connected with the loan of houses, cost of printing, and postages (other than those incurred by advertising, sittings, and marketing the eggs) would be borne by some outside fund vested in the hands of a committee.

The houses adopted for use in this competition should be movable ones, something like the pattern used in the Street Competition this winter. The farm selected for such a test as this would have to be carefully chosen, so that at all times the hens in the various flocks would be subjected to somewhat similar climatic conditions. should have no strongly marked natural features such as extensive woods or sheltering hills. If the flocks were distributed as widely as circumstances permit—the houses being frequently moved from place to place, so that, during the year, each flock would occupy perhaps twenty or thirty different situations—I think a fair average quality would be the result. If it were possible to do so, I would choose a farm mostly given over to grazing for this test, for it would upset the equality between the flocks if, for example, some of them had the run of a field which was being ploughed, or if some had a better bit of the stubble than others. The site chosen for the competition would, if possible, be on one of those farms where the land is largely broken up by hedges, making the fields small—the latter, perhaps, not averaging more than six acres apiece. It would thus be much easier to keep the flocks separate, while, at the same time, they would be closer together than they ever could be in wider undivided areas. I would insist that the general work of the farm-viz., grazing by cattle and growing hay—be not interfered with by the presence of the fowls. The latter would be in addition to the other stock. No special "poultry-man" would be permitted; the manager would have to do most of the work himself, and train a farm hand, gardener, or other person on the spot to assist him. My reason for suggesting such a stipulation must be obvious. The competition would have to be run as closely as possible as a practical farmer would run his field layers, and as he would not be likely to keep a proper poultryman, unless the latter's whole time could be employed at the job, then the manager of this test would assume the same position by getting a reliable man as a helper whose time was, for the most part, occupied by other farm work.

Although it is generally estimated that ten fowls to the acre is a suitable number to run in field houses, it would not be wise to attempt that number in this instance, for the flocks would be too close together. But the test could be worked by allowing four or five acres to each house, and, under some circumstances, very much less. In fact, the flocks should be kept as near together as is consistent with safety, so long as not less than an acre was allowed to each. In arranging the houses, a rough map showing the route they would traverse during the year should be sketched. Each house could then be placed in

the most convenient spot for moving. So as to have a double precaution against the evil results of adjacent flocks intermixing, I would arrange the latter as far as possible so that no two lots of Asiatics or Mediterraneans would be next each other.

A sharp lad might be employed during the first five months of the year to look out for the stray nests and see that no intermixing took place. Hens which lay away usually do so in the early morning, and they nearly always betray themselves and their nests. Therefore, I do not think that there need be much fear of loss in this respect, and the boy, if an "extra" hand, might always be employed with other work as well for a great part of his time, so that the whole cost of his labour would not fall upon the poultry

I would not attempt any recording of individual scores in such a laying trial as this one. Neither would the weighing and the allotting of "points" to this egg or that be recommended. An egg should be considered an egg throughout the year, but any flocks habitually laying eggs that could not be marketed with the others should be noted. The manager could grade the produce or not, disposing of it to his best advantage so long as an accurate record was kept of each pen's yield and of the value of the same. He would also,

as I have said before, have full control of the sale of sittings and advertise them as he thought best.

The value of the manure would have to be estimated carefully and used as the manager thought fit. The litter accumulated and kept dry from October to March or April might be strewn upon the land intended for hay that same year. The manager would be instructed to report upon the increased value of the hay crop as well as of the grazing, which latter would result from the manure dropped by the birds. In actual poultry-farming on these lines the improvement of crops would, of course, be infinitely greater, because more fowls could be run per acre. disappearance of moss and weed and any other points touching the question of the fowl's relationship to the land should also be noted. Any manure used for other purposes, or left over after the competition, should be valued according to its worth as a fertiliser on the holding.

The suggestions which I have laid down for

the management of a field test for layers are, of course, suggestions only; but I think that, however much readers may differ with me as to detail, most will admit the scheme, as a whole, to be a

workable one.

Attention is directed to an article in the Production Section on "Lessons of the Laying Competition.

# MY EXPERIENCES IN STARTING POULTRY-FARMING.

BY MISS WILSON.

WHEN I look back on the past five years' work amongst my poultry, I am amazed that I ever had the hardihood to take up a business requiring so much expert knowledge and skill after only one year's training in preparation for it. At the end of my training I considered myself very well equipped; at the present time I am convinced that there is still an immense amount to learn even in the management of the simplest details. In making this statement I do not wish to discourage others, but only to justify the occasional moments of depression, which doubtless come to all poultry-keepers, when hens do not lay and chicks do not thrive.

I started my business with five Buff Orpington hens and one cock, bought from a neighbouring farmer, who palmed off on me one sickly hen, given to him to be killed by a friend of mine; I lost her shortly afterwards. I also purchased two dozen White Wyandotte day-old chicks, Payne-Tammadge strain, and two dozen crossbreds from an advertising firm. These latter I lost altogether, as they were too weak and sickly

to rear. The lamp in my brooder-house caught fire one day, and until I could get another lamp the chicks were kept warm by hot-water bottles constantly renewed night and day. The survivors of this hydropathic system formed the nucleus of my White Wyandotte pen, which has always been a most successful one. I had fewer casualties with later hatches; but, when the chicks seemed to me past the dangerous stage, 21 of them fell victims to an insatiable cat, which was finally caught in a cat-trap, value 10s. 6d., the cost of which I hoped to repay out of my claim for compensation. I failed in this claim, but secured two very good customers for my produce, so perhaps I was not a loser in the long run.

At the end of my first season I found myself in possession of two good breeding-pens and a number of fine young pullets; also, I had disposed of a considerable quantity of eggs and table chickens direct to the consumer. During my second season I added to my trials by the purchase of an incubator, which now runs very steadily, and can be depended on for an average hatch; but in the hands of a novice, assuming for the first time entire responsibility for the same, it proved a maddening problem. I began by having my eggs incubated locally; but this ran away with too much of the profits, and I was forced to tackle it myself. Another complication arose from the use of a certain well-advertised brooder, in which the lamp never failed to go out whenever there was a wind. Many and many a night it had to be visited, sometimes more than once—often in the drenching rain—relighted, and protected with hurdles or sacking. It now has a

My two acres of ground contain an orchard sloping to the south-west, with a fairly heavy soil; a long strip of good light garden soil at the bottom, and, beyond this, another stretch of rising ground facing east, but sheltered from the north, in which the soil is light and sandy. Here are erected our hen-runs. I took the precaution to give each pen two good-sized runs, covered with grass, for the most part a thick growth of couch. This has not everywhere survived six months' maltreatment on the part of the hens, and six months has not proved a long enough time for freshly-sown grass to grow



A BROODER SHELTER ON MISS WILSON'S FARM.

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shelter erected over it, and behaves itself somewhat better. But during the blizzard last Easter the chicks had to be removed and crowded into another already sufficiently filled brooder. It was a case of perishing with cold or suffering from overcrowding, and the latter was the lesser evil. In stress of weather such as that all thoughts of one's own comfort have to be set aside, and unless one is prepared to toil on, wet and cold and hungry, until one's flock is catered for, it is better not to take up poultry-farming at all.

strong enough to hold its own against their depredations, so mustard or other catch crops have had to be used to purify the ground.

In spite of these precautions I have had to face the problem of a dwindling egg-basket, so, after many heart-searchings and the preparation of carefully-thought-out methods, I have this winter divided my double runs into four compartments, with a view to keeping one in grass and cropping the other three after the hens have run on each one for three months. The house stands in the centre, surrounded by wire netting, with a movable opening into each compartment. While the hens occupy one division, two of the others are being cropped with vegetables. This system, I hope, will enable me to grow good crops and to keep the ground in better condition for the hens. I will

take any one run to exemplify Plot A has what I am doing. hens on it at present, which are eating off the remains of a crop of winter greens; this will be planted with potatoes in March, and be ready for the hens next December. Plot B will have hens on it from March to June, when it will be sown with carrots, and later with orange-jelly turnips to be cleared off before the following March. Plot C is a grass run, and it will have a few chicks on it from April to June, and the hens will take possession from September to December. Plot D grows spinach in March, which the hens finish off in June; spring cabbages will be planted here in September. The crops are varied in the other runs according to position and soil.

I have two "nurseries" for the rearing of chicks. The "low nursery" is a run protected from the north, east, and west, our prevailing high wind; the sun shines straight into it, and the pitiless southerly rains beat full on it, but



[Copyright A PEN OF MISS WILSON'S FAVEROLLES.

one cannot be sheltered from "all the airts that blaw," so I am thankful for the measure of protection my cosy hollow affords. The bare soil here is well drained, and makes a famous dry scratching-ground in almost any weather; but after the early months of the year it gets too



A WELL-SHELTERED BROODER.

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hot and dry, so the chicks will be moved from there and the run will be cropped this year with cauliflowers and tomatoes. My "summer nursery" is in the orchard, a grassy run, with good shelter from old plum and apple trees, exposed to the westerly gales, but otherwise a happy huntingground in the warm summer days. Lower down the orchard slope is the raspberry plantation, now enclosed with wire netting and making several very good runs for bringing on the young stock pullets after the fruit season is over.

I have devoted myself so far entirely to utility poultry. I like to have good specimens of the breeds I rear — namely, White Wyandottes, Salmon Faverolles, next year Light or Dark Sussex, and a Faverolles-Buff Orpington cross—but I have not yet developed any ambition to send any of my birds to the show-pens. I have found the Utility Poultry Club useful in introducing to me those who have cockerels to exchange, as in this way I get fresh blood into my pens each year. I rear from 400 to 500 chicks and a few ducklings each year, but this is not sufficient to fill my regular retail orders.

I have generally had a pupil during the busy rearing season, one who has been able to take her share in the work; also I have the services of one or two boys, who work in the garden when not required for delivering orders, watering, cleaning runs and houses, plucking, and so forth. The feeding I always attend to myself.

## POULTRY-FARMING AS A BUSINESS.

BY EDWARD BROWN, F.L.S.

"Circumstances have arisen which make it desirable for me to live in the country, and I intend starting a Poultry Farm, having been successful as a breeder in a small way. I have a modest capital, but should want the business to yield a living profit. Can you advise me whether such a project has a reasonable chance of success for one who is not afraid of work and has had business experience?"

THE above is an example of many letters received, though it is by no means representative of a large section of queries which come to hand, in that it recognises that certain qualifications are essential factors in the attainment In numerous cases it is evident of success. that the writers have neither business aptitude nor experience, imagining that success is not dependent upon qualifications requisite in every other branch of agriculture, but that it can be achieved easily and quickly. It may, therefore, be desirable to consider the question thus raised, with a view to showing the many and varied points which must be taken into account in attempting to answer such a query. By our so doing some readers may feel discouraged, whilst others will be better able to understand what must be provided for. Preferable is it to clearly realise what an enterprise means than to enter upon it blindly.

### The Standard of Life.

First and foremost it is essential to know that the standard of life is an important factor, for upon that will largely depend the scope of operations and whether the profit obtained is satisfactory or otherwise. A labourer whose wages are from 15s. to 20s. per week, who does not pay more than 2s. or 3s. in weekly rent for house and garden, and who can make his poultry fit in with other work, would feel that he was on the high road to fortune if he gained £50 to £60 per annum out of his fowls. But he and his family would do the work, there would be no false pride in the selling of the produce, and he would not spend money on appliances more than to a very limited amount. At the other end of the scale is the standard set up by many who want a house to live in, which will give them modern comforts, probably with a good garden, maybe a stable for a pony or motor-car; they have ideas about what work they can and cannot do, and would be unwilling to sell their own produce. Hence it will be seen that in their case expenditure is on a higher plane, that cost of production is greater, and that, therefore, the overturn must be correspondingly increased. It is not too much to say that many failures in poultry-farming have been due to the basal and living expenses being on a scale which could not possibly be supported by the amount of

business done. A shopkeeper may live modestly but comfortably on the profits of his trade, say, in Islington, but to succeed in Oxford-street he would need to do ten times the amount of business, simply because his establishment expenses would be greater to that extent. Success in the latter by larger overturn and greater profits might sustain a Bayswater mansion, which the former could never do. So with poultry-keeping. Three hundred laying hens might (I do not say would) maintain life in a four-roomed cottage a simple life all the time—but would be totally inadequate for an eight-apartment dwelling with its greater comforts and expenses. In poultryfarming, it must be remembered, as Ruskin says, that "the true benefit is to extinguish a want -- in living with as few wants as possible."

### Not a Farmer's Question.

Believing, as I do, that, whilst the great bulk of eggs and poultry must ever be produced by ordinary farmers, what may be termed special poultry farms are essential to the progress of the poultry industry, it may be pointed out that the operations which would yield a satisfactory profit to the former would spell failure to the The farmer has practically no basal expenses. Rent, taxes, labour have to be met whether he keeps a single hen on his place or With him it is simply a question of a few special capital outgoings, such as those for stock, houses, and appliances, and for feeding the birds. The cost of production is much less than can ever be the case on special plants, and, moreover, the fowls will help him in his ordinary cultivation by manuring the ground. They will find, too, an important part of their food at no cost to him. Under these conditions the manurial value of fowls is greater than the rental value of the ground occupied by them, and, therefore, rent should not be charged. My contention has ever been that, properly managed, every hen kept by a farmer, whether he has five or five hundred, will return him a living profit over the food cost, varying, of course, with the class of bird kept and its productiveness.

### Basal Expenditure.

Before profits are realisable by the poultry farmer, what are known as establishment charges must be met. The margin beyond, if any, is his

remuneration. It is necessary, therefore, at the outset to see what these mean, because by so doing we shall be in a better position to appreciate both the scope of operations and the amount of capital calculated to secure a successful issue. At this point it is desirable to state that a common mistake is to charge rent of dwelling and, in some cases, household expenses against the poultry That ought never to be, as these are personal charges. True it is that the house is essential to enable anyone to carry on his work, but the business and the cost of living ought to be A bank clerk with £300 per kept distinct. annum does not say that it costs him £250 to live, and that therefore he only makes £50 each year. A merchant or manufacturer who earns £1,000 per annum keeps his business finance distinct from his household expenses. Both pay income-tax on the actual amount earned, and rightly so. If their income is unequal to their standard of life the blame is in the last-named, which must be reduced accordingly or other The same principle sources of income secured. should be applied to poultry-farming. Hence, if a house and ten acres of land were rented at £40 per annum, that sum should not be charged to the business end, but probably one-third of it, according to the value of the house itself.

Taking such an occupation as that just named, we may see how it works out. Onethird of £40, with rates and taxes in addition, would mean that this item would total at least £18 per annum. To cultivate ten acres some labour would be required, varying in accordance with the crops secured. As these should pay for the labour devoted to them, we may take 10s. per week for poultry alone, or £26 in all. amount of capital is difficult to determine, but generally speaking £15 per acre should be enough, if portable or colony houses are used and wire netting is avoided except for breeding-pens. Thus the interest to be charged will be £7 10s. per annum. These items give us a total of £51 10s., and if we allow £8 10s. for sundry establishment charges we have £60 to be earned before the owner can look for any profit for himself. In some instances this might be reduced, but it is a fair basis upon which to work, and it will need strict economy to be kept down to that point. I have known the owner of twenty birds hire a horse and cart to help him in his operations!

#### Production Returns.

Looking at the question first from the standpoint of production for market, it is possible to see what scale of operations will be necessary. It has been proved that a hen kept for egg-laying can be made to yield a gross profit of 5s. per annum over the actual cost of food. But that will only be where the average fecundity is a good one, say, 110 to 120 eggs per annum, where feeding is careful and good markets are available, all of which profoundly affect the result. If we take 4s. per annum as a safer estimate, then 300 laying hens must be maintained to provide for the  $\pm 60$  establishment expenses already named. If 600 hens are kept there should be a profit on this item of £60 per annum, but to achieve this more land than ten acres should be secured. That need not, however, influence the result, as the rent of any additional land should be more than met by the crops taken therefrom. More than 600 hens would involve additional capital for houses. &c., and for labour, so that the gain would not be on the same ratio.

In some districts it is more profitable to go in for raising table chickens, though that is so for only a few months of the year, whilst the establishment charges continue for the entire twelve months. In our experiments on the College Poultry Farm, Theale, we have proved that a chicken can be reared to twelve or thirteen weeks at a cost (inclusive of egg, hatching and rearing) of 9d. If, with the maintenance of stock birds, we put it at 1s., that will be safe. Such birds can be sold for eight months of the year at from 2s. to 3s. 6d. each, and we may take 2s. 6d. as an average—provided, of course, that they are of suitable breeds—leaving a gross profit of 1s. 6d. each. Thus to meet the £60 referred to above 800 chickens must be bred and sold. With the space and labour involved in the sum named, without any attempt at fattening, 2,000 might be raised, in which case a profit to the owner of £90 per annum might be obtained. Beyond 2,000, more land, more labour, more capital would be needed, reducing pro rata the additional gain. Of course in many instances a combination of the two branches would give better results.

#### Production for Market Not Sufficient.

What has been stated above indicates at once why so many ventures have failed—namely, because they were on too limited a scale to yield the margin of profit required by their owners beyond establishment expenses—and why farmers succeed in production for market where specialist plants do not. It also explains the great American plants, where thousands of laying hens are kept. I do not say that we shall never attain success in that direction, but the end is not yet in sight; not, at any rate, so far as the purely marketing trade is concerned, though we are nearer to it than was true a few years ago. After visiting many of the best American plants three years ago, I came to the conclusion that I would not accept as a present the best American poultry-farm, if compelled to run it entirely on market lines. As

operations extend expenses increase, as in every other enterprise, and thus the margin of profit is reduced. In brief, it is the farmer who makes money out of egg-and poultry-production for market, not the specialist, who must gain his rewards by increasing his returns not so much by quantity as by enhancement of returns for the same number. Hence poultry farmers are those who make their money as breeders, not as food producers, though they should ever keep that side in view, making it subsidiary, however, to the other. The poultry industry needs the farmer as producer, the specialist as breeder. Both are requisite, and both can obtain adequate and in some cases large rewards. There is room for the small man with limited means, whose labour is his chief capital, and for the man with money, if they will go into the work on commercial lines, but not otherwise.

#### Whence the Profit Comes.

Very few words will show the importance of keeping the breeding stock end in view on specialist plants. Several men and women have not merely made excellent incomes but even fortunes in this way. It is not given to all to be equally successful, but there are many who make an excellent income. There is room for a considerable increase in the number of breeding farms. The business has to be created, but that has been and is being done on all sides. With the advent of small holdings there will be an increasing demand for pure-bred poultry, and the export trade is capable of vast extension, not on fancy but on utility lines. The exhibition side I do not touch upon, as that does not promise to grow in the same ratio, and will either be revolutionised or become a mere matter of sport. Here are the reasons why special plants take up sale of stock, &c.:

A stock fowl will cost to produce, apart from capital expenditure, original expense of breeders, and advertising, 3s. to 3s. 6d. at six or seven months old, and for killing will not be worth more than 2s. 6d. to 3s. Selected specimens will realise as breeding stock from 5s. to 20s. each, and a few perhaps more. At an average of 7s. 6d. each, the increase is 200 per cent. over the killing value.

Day-old chicks can be produced at a total cost, including packages, of 3s. to 3s. 6d. per dozen, and will sell at from 7s. 6d. to 15s. per dozen, again an increase of 200 per cent.

Eggs for hatching will cost to produce, apart from capital, original stock, and advertising, inclusive of packages, 1s. 6d. to 2s. per dozen,

and will sell at from 5s. to 20s. per dozen. In this instance the increase of returns will be from 300 to 500 per cent. over the market value. Thus with all three the gains are substantial, and may be supplemented by an ordinary market trade.

### Capital and Reserve.

Sufficient capital is a necessity. Apart from houses, it may be taken at £10 per acre. Thus, the more intensive the plant, the greater the capital for buildings that will be required. There is, however, one point in which many fail—namely, provision for living during the formative stage. I have known several promising enterprises fail through lack of such. In all businesses there must be the time of building up when outgoings are greater than returns. With live stock that must ever be so. Enough should be placed on one side for living expenses during a period of two years, by the end of which time operations should be in full swing. If the capital is drained from the first for household expenses, then only one result can be expected—failure, just when success is within grasp. Those who have assured But such as are not so incomes are safe. fortunate will be well advised to secure employment to provide for their maintenance until they feel justified in devoting all their time to the poultry farm. An instance may be cited. A platelayer in a southern county took up poultrykeeping, helped by an able and energetic wife. For five years he lived on his railway earnings, or less, working hard and gradually extending his operations. At the end of the time named he was able to buy a farm, for which he paid £500, and then—but not until then—did be become wholly and entirely a poultry-keeper.

#### Salient Facts.

Here are some hard facts which should ever be kept in mind by those who think of going in for poultry-farming:

The average value of 1,000 eggs for eating is less han £5.

Five hundred laying hens showing a gross return of 4s. each per annum over the food cost will only yield a profit of £100, from which rent and all establishment charges have to be met.

One thousand chickens for market are worth, say, £125, and will cost to produce £50, so that from the balance of £75 has to be deducted fixed and general expenses before the owner realises any profit.

Hence exaltation of the standard of life involves corresponding increase of output or enhanced returns. Aim high, have large ideals, but build gradually; this should be the rule. The cost, however, must be counted.

# WHO'S WHO IN THE POULTRY WORLD.

### MISS LILY MURPHY.

I T must be nearly twenty years ago that the first brief courses of lectures on poultry were given at the Munster Institute, Cork, since which time considerable attention has been given to this subject. For the last four years the work has been in charge of the subject of our present sketch. Miss Murphy was one of the earliest instructresses when the Irish authorities awakened to the importance of poultry-keeping on industrial lines.

Miss Murphy began to taken an interest in pure-bred poultry so far back as 1895, and the following year made her début as an exhibitor, when she succeeded in taking a first prize. Her progress awakened aspirations that had hitherto lain dormant. The pursuit thus begun continued with added interest and experience until a fresh opportunity presented itself in 1901. After taking a course of instruction at University College, Reading, and the College Poultry Farm, Theale, in the examination of which she secured the certificate with distinction, Miss Murphy was appointed instructor in poultry-keeping in King's County, and the following year went to County Kilkenny, continuing in the last-named with great success until the Munster opening offered itself in January, 1905.

Such is the almost bald account of labours which have had their full share in the remarkable developments that have marked the Irish poultry industry during the last few years. At the Munster Institute there are fifty pupils constantly in residence, all of whom take poultry-keeping as an obligatory subject, and, therefore, come under Miss Murphy. Only a few of these qualify as

teachers, but such as desire to do so are kept in training for eighteen months, the dairy and poultry courses being concurrent. Teaching is ever hard and difficult work, but one advantage which this sort of teaching has is the large amount of outdoor work involved. This adds to the interest both of teacher and student, and when there is zeal and enthusiasm, as is the case with Miss Murphy, on the part of the instructor, the influence exerted is great and wide.



MISS LILY MURPHY



BREEDING=PENS AT THE MUNSTER INSTITUTE, CORK.

### MR. P. SWEERS.

M. P. SWEERS was born in 1859 in Amsterdam, but in 1885 he took up his residence in Germany. From 1885 to 1903 he lived in Düsseldorf, and during this time he worked extensively with poultry. The breeds he kept were principally Black Minorcas and Brown Leghorns. In 1903 he removed to Crefeld, and purchased in the neighbourhood of that city sufficient land to enable him to carry on his practical poultry-keeping. He very quickly realised that utility poultry-keeping could be made profitable if a solution could be found for certain problems, and thereupon set himself to experiment on such subjects as feeding, disease in chickens, and dead-in-shell. Every year Mr. Sweers makes public his experience in a report which is sent

MR P. SWEERS.

out gratis. It will be remembered that we gave a short notice of his last report in our December issue. In a future number Mr. Sweers will publish particulars as to his remedy for combating chicken mortality, and in a few, months he hopes to explain the cause of dead-in-shell.



MR. F. V. THEOBALD.

# MR. FREDERICK VINCENT THEOBALD.

EACH of the many sciences involved in the scientific breeding of poultry demands its specialist nowadays. Zoology is no exception; and the expert zoologist who pays special attention to that part of his subject which is concerned with the parasitic diseases of fowls is not easily come by. Mr. Theobald hardly needs an introduction to those of our readers who are conversant with the wider problems of the poultry industry in its relation to other branches of agriculture. As vice-principal of the South-Eastern Agricultural College at Wye, as the holder of several honorary appointments, and as the author of a great number of zoological works, including a leaflet on the Parasitic Diseases of Poultry for the Board of Agriculture, he has a name and repu-

ation both in and out of the British Isles. We believe that it was in 1906 that he received from the Khedive the Imperial Ottoman Order of the Osmanieh in recognition of his scientific services rendered to the Soudan Government.

Mr. Theobald was born in 1868. He entered St. John's College, Cambridge, in 1887, and graduated with honours in the Natural Science Tripos in 1890, taking his M.A. degree two years later. After four years' experience as an extension lecturer on Economic Entomology, beginning in 1890, he joined the staff of the Agricultural College as Zoologist in 1894, and has remained attached to that institution ever since. From 1901-3 he had charge of the Department of Economic Zoology at the British Museum of Natural History. He

set up the gallery of economic zoology, where various agricultural, horticultural, forestry, animal, and human pests and parasites may be seen.

He is a fellow of the Society of Tropical Medicine; an honorary member of the Société de Pathologie Exotique Française, of the Association of Economic Entomologists of America, and of the Scientific Committee of the Royal Horticultural Society; a member of the Pests Committee of the Central Chamber of Agriculture and of the Permanent International Commission on Agricultural Education; a past president and vice-president of the Association of Economic Biologists; and hon. consulting zoologist to the National Fruit Growers' Federation and the National Amateur Gardeners' Society.



### Breaking Up the Breeding-Pens.

The breeding-pens that were early mated will now require to be broken up and the birds dispersed, leaving any necessary continuity of production to the spring mated stock. No hard-and-fast rule is possible, how. ever, in such a detail of management, so much depending upon individual circumstances; but, except in the case of very vigorous males and very well-conditioned females, those of the earlier mating will show some decrease in fertility and a corresponding lack of stamina in the progeny, which should be avoided before it occurs. Even the birds of spring mating should be subjected to careful examination relative to suitable breeding condition, particularly the male birds. When the disintegration of a breeding-pen takes place, the proper disposal of the individual members requires consideration, remembering that the object of the division of the sexes is recuperative—as regards those birds reserved for remating in the future. The separation must not only be thorough, but it must continue until the desired condition is recovered. An out-of-the-way field is the best situation for the cocks, where they will be beyond sight and sound of the hens, and where the surroundings are strange enough to interest them and the range is suitable to their constant employment at foraging work. Cockerel pens are well enough where their use is unavoidable, but the free run is altogether preferable; and in any case the hens should be accorded the freedom of a wide grass range. In the disbanding of the pens, when the old hens are set aside for sale, the same treatment should be extended to those roosters whose services will no longer be required—a detail too often unduly delayed.

### The Dietary.

Improved climatic conditions suggest a readjustment of the dietary in general, in order to bring the character of the feeding more into line with the requirements of the stock under altered and milder conditions. Maize and maize-meal, for instance, should now be practically struck out of the list, and such a food as barley should in most instances be discontinued or used in very small proportion. Wheat and oats remain as the staple grains, and are suitable in the majority of cases—the latter especially being safe and more or less sufficient in any ordinary circumstances. For the bulk of soft food

mixtures, ground oats, sharps, and bran contain desirable The spring growth now enables the constituents. feeder to discontinue the use of roots and clover, upon which he has had to depend so largely during the winter months, and in many cases the heavy demands of a variety of stock have run the supply of these winter foods very short. Free running fowls, ducks, geese, and turkeys will now find nearly (if not quite) all they require in the way of vegetation in the new grass; and for poultry in confined runs there is plenty of other green food now available. A poor man's poultry vegetable which the rich need not despise—is the common great nettle (the only perennial British species), which on account of its habit of growing abundantly near human habitations is as free to the townsman as the countryman. Boiling dissipates the stinging property. The uses of that other common plant, the dandelion, are referred to on page 514.

### The Rearing-Ground.

The rearing-ground in present use should not be the same plot upon which the early birds were raised; the grass should be growing there for a crop. The grass on the run in present use should not be too long, and if necessary a portion should be moved around the coops in order to allow the little chicks freedom of action and to protect them from the clinging dampness of early morning. The situation selected should preferably be within sight of the dwelling-house or farmyard, for the better protection of the youngsters from vermin. Birds of prey are just now especially active, and the neighbourhood of cover likely to harbour their enemies is to be avoided in the disposal of the young birds; whilst such as are beginning to run without the protection of the hens should be provided with plenty of hutches or other shelters into which they may run upon the unexpected appearance of crow or hawk. In the matter of adequate shelter the heat of the sun must be considered, especially in the case of hens cooped out on exposed fields, where the unprotected situation may render them totally unfit and unwilling to perform their duties to their broods.

## REARING GUINEA CHICKS.

By J. W. HURST.

ALTHOUGH they may be hatched earlier and later—and perhaps the great majority are late rather than early—by far the most satisfactory birds are those whose rearing is commenced in May. In common with the turkey and the pea-fowl, the guinea-fowl is only partially domesticated, and retains certain wild instincts and habits in a greater measure than have survived in the common domestic fowl. In point of fertility the eggs bear comparison with those of the pheasant—viz., the hatching percentage tends to run high under suitable conditions, but they are not so successfully entrusted to ordinary hens for incubation and rearing. Indeed, the coop method of rearing never produces such results as are secured by allowing the parents (and the male bird assists the hen in rearing) to bring up their young in a

semi-wild state. Nevertheless, such conditions are not generally possible or convenient, and for the ordinary purpose of the farmer the May broods are the best. In the consequent necessary employment of the common domestic hen as a foster-mother there is need for a rather considerable amount of care and attention during the early days of rearing, because the susceptibility of the guinea-fowl chicks to damp conditions is materially increased by coop-rearing, just as in the case of young turkeys that are subjected to the usual conditions of rearing under domestication. It is, however, worth while studying the nature of these birds, because by making common-sense concessions to their requirements much that tends to their reputed delicateness may be avoided in proportion as hardiness is preserved. The average English poultry-keeper, who has accepted his legacy of the highly domesticated fowl of barn-door description without question, too often applies the old methods indiscriminately without pausing to consider how far other birds may or may not be amenable to similar treatment, with its various limitations, and when he meets with failure is too ready to hastily condemn as delicate those that his own set methods have made so.

The difficulties of coop-rearing are somewhat increased in the case of guinea-fowl chicks by the fact of their extreme shyness, so that any roughness of handling or suddenness of approach or movement is at all times to be avoided; and everything in connection with these interesting youngsters must be done gently and deliberately. But when once the early period of rearing has been successfully passed, there is very little subsequent trouble to be anticipated. It is nearly always necessary to use a floor to the coop in order to keep it dry enough, and it is a very good plan to have a piece of dry sacking handy to place on the boards before shutting the birds in for the night. Although the coop should be placed in a suitably open, but properly sheltered, position, it must always during the early days have a small run or wire-netted enclosure attached; otherwise the young birds will wander, or their shyness will lead them to become lost in their search for long grass or other cover. As soon and as frequently as possible the hen should be allowed out with them, within bounds suited to their age and development; and the earlier this method of hardening is allowed the better the birds will thrive and the more rapid will be their growth. They will require the brooding and other attentions of the hen for six weeks, or longer; but when they have reached about that age, if the warm weather has set in, they will do very well on their own account, and will find much of their living if turned out in the open and allowed comparative freedom.

Reared by their own parents, who do not, however, contemplate this duty very early in the season, the young are very sturdy and able to ramble for considerable distances in search of food—and young and old may in such circumstances be left almost entirely to their own devices; they live mainly upon suitable foods of a "natural" character, their progress is more rapid, maturity more perfect, a larger number is reared, and

health and condition are preserved in a degree well-nigh impossible in ordinary coop-rearing.

The general dietary may very suitably be similar to that used in turkey- or chicken-rearing, including for the most part such foods as biscuit-meal, barley-meal, Sussex ground oats, together with a regular and sufficient supply of well and finely chopped vegetable food. It is usual to begin feeding with chopped hard-boiled egg and stale breadcrumbs or fine biscuit-meal, mixed warm with skim milk; adding barley-meal and chopped onion after the first few days, and gradually leaving out the hard-boiled egg. Towards the end of the first week progress will be considerably aided by the allowance of a fair proportion of animal food—ants' eggs, maggots, small worms, or shreds of raw meat; and the early introduction of grain feeding is advisable, using at first such seeds as millet, hemp, and canary.

# THE SIX MONTHS' LAYING COMPETITION.

BY ARTHUR NEWPORT.

THE report of the Six Months' Laying Competition is a comprehensive and exhausting document, and except that it does not give the particulars of finance, there is little of interest to poultry-keepers that is overlooked; but whether this huge array of figures and remarks is going to be thoroughly digested by any beyond the leisured enthusiasts is open to grave doubt. One can hardly imagine the busy poultryman, who is trying hard to recover some of the ground lost during the late bad weather, sitting down to peruse the statement in the way it deserves.

Reviewed generally, the aggregates of the competition point to the fact that it has been a great success, and since the scheme of operations was considerably larger than has ever before been attempted in this country, and the results compare very favourably indeed with past laying competitions conducted on smaller scales, the managing body may be congratulated on the outcome of its venture. As an object-lesson of what can be done in the matter of securing a supply of winter eggs under simple conditions, the returns are edifying, and they should be the death-knell of the old countryside saying, "Eggs b'ain't in season till Easter." The grand total during the test of 182 days was, excluding the five pens withdrawn prior to its conclusion, 41,887; and this, distributed over the whole of the contestants, gives the high average of 73 per bird. Some of the upper stratum go far above this number. Thus the winning pen reaches 118 per bird, and six other pens are over 100, while the lowest yield in point of number of eggs laid is 33 per bird.

The question of strain rather than breed is always emphasised by those who control these laying competitions, and, though cordially agreeing with this in the main, sometimes uncontrollable circumstances disarrange the best-laid plans. The pertinent remarks of the manager upon the birds as received at Street in October

are instructive, and, despite repeated warnings, many were reported "too young," others (here the swing of the pendulum as regards age and the developing influence of a good summer and autumn are shown) were exhibiting signs of that baneful moult that comes from too early maturity.

There is still an amount of prejudice in favour of the "laying breed," apart from the consideration of "laying strain." Of course, strain is not everything, for the age of the pullets and their treatment during the period of growth have an overbearing influence on the winter laying. A summary of the competition will illustrate the feeling that exists that "the breed is the thing," and the averages confirm this to some extent, though a closer scrutiny may upset it.

				Average	
Breed. No.	of Pe	ens.	Eggs.	per Pen.	
White Wyandottes	24		11,269		469
Buff Orpingtons	19		9,332	•••••	491
White Orpingtons	ΙI		4,895	• • • • • •	445
White Leghorns	10		4,194		419
Black Leghorns	6		2,518		419
Buff Rocks	4		2,075		518
Anconas	2		951		475
Faverolles	2		722	•••••	361
Black Wyandottes	2		519		259
Silver Wyandottes	2		704	• • • • • •	352
Speckled Sussex	2		689		344
Light Sussex	2		657		328
Partridge Wyandottes	I	•••••	337		337
Other Breeds	8		3,025		378
Total	95		41,887		439

By scanning the individual prize-winners' results, it will be apparent that the position in point of merit was decided by the value of the eggs laid, and not by the numbers of eggs alone. This is a most sensible method of adjudging, and one that encourages the breeder of birds that lay when eggs are most scarce. For years it has been pointed out that the early winter egg is worth more than the later one, and the awards here drive home the conclusion very forcibly, though, as a passing comment, it may be noted that the prices of eggs at Street compare rather unfavourably with those of some of the centres reported by the Board of Agriculture for the same period.

A review of this interesting event would not be complete without a reflective glance at the past affairs having winter eggs as their object. One misses the once - popular champion layers — Minorcas, Buff Leghorns, Golden Wyandottes, all winners in foregone laying competitions, which are not to be found now in the list of aspirants; while Barred Rocks and Brown Leghorns are entered in only single pens, and finish nowhere. Surely this indicates the progress that is being made, and proves that more profitable birds are now available. One is reluctant to disparage the old champions, but facts are facts, and the decadents do not stand a chance with the up-to-date bred-to-lay birds. It is pleasant, however, to find some of the much-maligned older varieties still doing well, the most notable being the White Leghorns, which have been famous for thirty years as layers-it will be noticed they are all lightweights, and not bred for size—and the Buff Orpington, which, though only about half the age in point of years, keeps in the foreground where the prizes are to be picked up for winter laying, despite its deplorable aptitude for broodiness when the *cheap* eggs are about. The Buff Rocks, too, though never a popular fancy, are a well-established breed, and their position at the head of the list will be a surprise to most.

There are other debatable points raised by cogitating on the various statistics presented in this ample report, and it is difficult to deal with them in a short notice such as this. It is reasonable to suggest that an account of the financial pros and cons should be rendered upon

### TURKEYS AND HOW TO REAR THEM.

BY C. F. FALKNER.

TURKEYS are to me the most interesting of our domestic varieties of poultry. What is grander in spring than the strut of the turkey cock as he escorts his hens around the stack-yard or paddock? What more quaint and interesting than the brood of youngsters as they stroll along a hedgerow catching flies or searching for grasshoppers in the long meadow grass, constantly uttering their peculiar cry? In autumn we have the flocks of well-grown youngsters wandering in their own majestic style over the stubble fields, gleaning corn and



A GROUP OF MR. FALKNER'S MAMMOTH BRONZE TURKEYS.

[Copyright.

utility lines, and doubtless this is to follow. As to one matter that lies not exactly within the scope of this contest, it would be a gratification to those who study the question to be informed, quite as an act of courtesy, how the eggs utilised for hatching have turned out. Some of us have theories more or less well founded about the fecundity of pullets' eggs; and, again, there is the suggestion that the best layers are often incapable of reproducing themselves during a protracted period of laying under such adverse circumstances of weather as these contestants have had to encounter.

picking up a few stray insects. This is truly a magnificent sight, especially if the number of the flock runs into three figures; and, finally, we come to winter and Christmas, the last, doubtless, the most familiar, and, to some, the grandest stage of all, judging from a line in an old verse, "For a turkey braised, may the Lord be praised." At any rate, it is an undoubted fact that the turkey, dead or alive, is the king of the poultry world, whether he is gracing the farmyard, the poulterer's shop, the show-bench, or the dinner-table.

I will not describe the numerous varieties of turkeys

or their specific merits. Suffice it to say that the most widely known are the American (or Mammoth Bronze), the Cambridge Bronze, the Norfolk Black, and the Austrian (or White) Turkey, of which the most popular is undoubtedly the Mammoth Bronze, on account of its size and hardiness. But whichever variety is selected, the object in view is invariably the same, and that is to obtain a well-developed, thick-breasted bird. And now, how is this to be obtained?

The stock birds should be settled in their quarters early in the New Year, great care being taken in their selection. First as to age. A turkey in its wild state does not mature till it is two years old, and a gobble

of disease or deformity is absolutely essential. One cock can be mated with eight to ten hens. Having selected your stock birds, get them settled in their permanent quarters as soon as possible. A large, roomy, but not draughty, open-fronted shed is a good roosting-place, although an ideal position is a tree selected by the birds themselves in a park. But few breeders are able to allow this owing to risk of losing them by thieves, either two- or four-legged.

Eggs may be expected early in March, and as the hen is a particularly shy and timid bird, she will wander a long way to find a suitable nesting-place. Convenient places should be made up for her near at home to select



TURKEYS ON AN EAST ANGLIAN FARM.

will retain his supremacy in a flock for four or five years. I prefer, all things considered, two-year-old hens and a cock a year or two older, and, for size, to obtain this in the hens if possible; the larger the better, anything from 18lb. to 24lb., but bearing in mind that the heavier the hen the less eggs she is likely to lay, especially if the extra pounds are attributable to fat. The cock should weigh about 30lb. to 35lb. if in fair condition. I carefully avoid a bird of either sex that does not carry plenty of breast, and one that has a prominent nob on the point of breastbone. Of course, freedom from any trace

from. An old barrel lined with leaves and straw, a thatched hurdle or two placed in odd corners, or a few boughs placed against a wall all make excellent places for her to creep under and lay her eggs, which number from about 13 to 35 each batch. It is always advisable to collect the eggs as laid, and to hatch the first batch under ordinary hens, breaking the turkey hen of her broodiness as soon as noticed, when she will re-commence laying in from ten days to a fortnight. Collect these eggs as previously, but the Turkey hen may be allowed to hatch them herself, and, as the

chicks will not appear much before June, her motherly care will be of great assistance to her brood in chilly autumn.

An ordinary hen will not cover more than nine Turkey eggs, so it is advisable to put three hens down at once, and then at hatching time you should have two good broods. A turkey hen will cover from 15 to 25 eggs. A quiet place, not too light, should be selected for the hens to sit in. Great care must be taken that the nests are carefully made and kept clean and free from vermin, that the hens have plenty of room, and that they, too, are kept free from vermin. The period of incubation is twenty-eight days. During hatching time the hen should be disturbed as little as possible, for fear of her trampling on the chicks, which are exceedingly weak and feeble when first hatched. Remove the empty shells and allow the hen to come off and feed only if restless. It is best to try and arrange to give her a good feed before the first chick is hatched. Turkey chicks hatch very rapidly and cleanly if the eggs are fresh, a whole hatch coming off in five or six hours. The newly hatched chicks should be left in the nest thirty-six hours, after which time they should be quite strong. Remove hen and chicks to a large, dry, well-ventilated coop with wire-covered run in front and board floor covered with dry chaff or peat moss if early in the season. The coop and run should be placed in a sheltered corner, where plenty of good grass and herbage are obtainable.

The chicks' first food should consist of hard-boiled

egg chopped fine and dried off with ground oats or crammings. This food may be given for the first four or five days, varying it with an occasional feed of biscuitmeal and a last feed at night of a reliable dry chick food. After the first few days the egg may be replaced by fine pollard, scalded and dried off with ground oats, or boiled rice dried off with crammings, these foods to be continued for the first three weeks. The chicks must be fed regularly and sparingly every two hours, and although it may not be apparent just now, overfeeding, mind, is fatal, and special attention must also be paid to the regular supply of water, flint grit, and oyster shell. After three weeks the interval between the feeds may be increased to three hours; green food in the form of chopped onions or dandelions may be added to the soft food, which may be mixed with skimmed or new milk. Cracked wheat or groats may replace the dry chick food. Vary the foods as much as possible, but do not make any sudden changes. Move the coop and run on to fresh ground daily, and when space and weather will permit allow the hen to roam about with her chicks after the first week. The hen and chicks should be periodically examined to see that they are all quite free from vermin, which are the cause of many fatalities.

This system of feeding should be continued till the chicks have "shot the red," which they do when from eight to ten weeks old. About this time the hen will be thinking of leaving her rapidly growing chicks, so they should all be moved to a nice dry, well ventilated, but warm house about 8ft. by 6ft. and 6ft. high at ridge, and mounted on wheels. No perches should be allowed, the floor should be covered with clean dry wheat straw, and here the chicks should be warm enough when the hen forsakes them. They will now only require four feeds a day. Do not drop off the onions, which give tone to the system. Their evening food may now be whole wheat or good heavy white oats, and as soon as a field of corn is cut and carted, the turkeys should be moved on to the stubbles without delay, and the house moved daily, when they will only require two and probably one feed a day, and their growth will be amazing. Keep them on the stubbles as long as there is any corn for them to pick up, or until the ground gets wet and cold; they must then be moved to their winter quarters, and nothing beats a good barn.



Mr. Falkner believes in keeping his fowls in surroundings that are as close to Nature' as possible. This photograph shows a pen of Indian Game. [Copyright.



### English Trade with the Transvaal.

The warning which appeared under the above heading in the "Diary" of last month's RECORD (page 412) will, no doubt, have been perused with much interest by those English breeders who have been in the habit of exporting live poultry to the Colonies. There can be no doubt, from correspondence which I have had with English fanciers now resident in South Africa, that during the past three or four years the trade between English and Colonial poultry-breeders has not been on an altogether satisfactory basis. Too frequently of late complaints have been made by buyers in South Africa that the quality of the poultry sent out from this country has not come up to expectations. But there are many things to account for this state of In the first place, the prices offered for show birds (I am dealing with the subject from the purely Fancy standpoint) have not been sufficient to tempt breeders over here to quote for their best stock. It must be remembered in this connection that the Fancy at home is now in a better position financially than it has been for some time past, and there are always plenty of exhibitors who are ready to pay long figures for really good show birds. In most businesses (and the poultry Fancy is, after all, a business) quality is according to the price offered. Then, again, just at present there is something like a boycott in South Africa with regard to anything English, and the American boom is on. "Every dog has his day." There are other reasons, too lengthy for discussion in these notes, but it is rather wide of the mark to say that "Pure-bred English birds are utterly discredited in this colony," and that "there is absolutely no doubt that this colony is lost to the English breeders." If those statements are true, how is it that the importation of such birds continues? However, the excerpt in last month's "Diary" appears to hit hardest at the utility breeders, and they will doubtless "see to it" that in future their birds are bred with sound constitutions.

#### Eggs for Sitting.

The responsibilities of those fanciers who sell eggs for sitting are often misunderstood, and what one is apt to regard as quite common knowledge in these matters is

frequently unknown. At a recent meeting of the Poultry Club Council an application was received for a ruling on the following subject: "When a sitting of eggs, or any part of it, is destroyed in transit between vendor and purchaser, is the purchaser entitled to the replacement of the broken or damaged eggs from the vendor?" The Council decided that the purchaser is not so entitled, and that it is for him to apply to the carrier for compensation for damage. Personally, however, I greatly question if such compensation can be secured unless the receiver signs for the eggs as "not examined." I think that most way-bills-at least, the columns in which the signatures appear—are headed "Received in good condition," or words to that effect. Hence, if one signs in the usual way, it would surely relieve the carrier of any responsibility. It is a small item, but it may mean Another thing in connection with eggs for sitting is that vendors are not morally nor legally bound to replace infertile eggs unless they advertise to do so. No one can guarantee the fertility of new-laid eggs; and I hear from a reliable source that even the latest invention, the sexophone, has failed to do so, since some of those which at a recent test were declared sterile have proved fertile!

### The Poultry Club.

I see that the Poultry Club has been "getting into hot water" lately because it has dared to frame certain rules without first consulting the specialist clubs. Why it should first consult the clubs on matters which do not concern them is difficult to see. As a whole the specialist clubs are useful bodies, but they cannot sway the whole Fancy. They should do so, perhaps, but that they do not has been proved time after time. Just to give one Years ago the Orpington Club (now the Black Orpington Club) refused to recognise any other than the black variety of that breed. The buff, then the "new" branch, was declared to be-well, not an Orpington. But what of the Buff Orpington Fancy today? It is one of the strongest in existence, and its club has probably the highest membership of any single variety specialist club. Opposition to a new breed is generally the best advertisement going, and the controversy which raged at the time of the introduction of

the Buff Orpington gave the variety the finest send-off possible. Just now the "trouble" is that the Poultry Club has framed rules for the introduction of new breeds and varieties. Something of the sort was necessary. But certain fanciers apparently fear that the Poultry Club Council will, under those rules, allow "all sorts and conditions" of new breeds and varieties to enter the lists. They evidently overlook the fact that the Council, which consists of vice-presidents, delegates from county branches, and other officials, is composed chiefly of members of specialist clubs, and includes the names of many prominent breeders and exhibitors.

### The "Bone Test."

By issuing the new ring the Poultry Club, in my opinion, is pandering to certain faddists; and the sooner it quits that nonsense and continues on strong lines the better. Those members who went into committee and originated the famous "bone test" were not the children of the Fancy. They knew what they were doing. They recognised that the best rings for "guaranteeing" the age of the birds were useless to prevent fraud, hence they practically said, "Away with chicken classes, or if fanciers must have them then let the birds answer the bone test." And if the "bone test" is not a good enough one, I want to know of a better. I see that a writer in a contemporary, who usually pens that which is really worth perusing, has recently had a bad attack of hysteria over the "Poultry Club's new regulations" concerning the exhibition of chickens. He points out that "a number of summer shows require birds entered in chicken classes to be hatched in the current year," as if that is a new regulation. I might add that Queen Anne is really dead. The number of shows insisting on chicken classes being only for birds of the year will not be greater in 1909 than it was in 1908, nor than it has been for some years past. Show committees are responsible for their own schedules. No doubt if they adopted that farce of providing classes for "Buff Orpingtons or Lincolnshire Buffs," fanciers would still patronise the classes. If fanciers are going to support the "bone test" let them refrain from exhibiting in chicken classes which are provided solely for birds of the year. There is ample room for their exhibits in the other section. But the sub-committee which was appointed by the Poultry Club to inquire into the whole question of early chickens for exhibition appeared to be unanimous that the best plan would be to entirely abolish classes for chickens. And I certainly agree that such would be the best plan.

### Rose-combed Plymouth Rocks.

It has been asked whether the Rose-combed Barred Plymouth Rock is a likely new variety to be included in the list of pure breeds, those which are recognised throughout the poultry Fancy as being able to produce a certain percentage of their like. The suggestion has been made that it is none other than the Cuckoo Wyandotte revived; and during last show season at least one Wyandotte fancier exhibited a Cuckoo at a

prominent event, and, I believe, gained a challenge cup with the bird. It was no doubt a smart move; but it remains to be seen whether it will have the effect for which it was doubtless exhibited. Pea-combed Plymouth Rocks have been bred in America for many years. In England, however, fanciers have for ages been accustomed to consider the Plymouth Rock solely as a breed with a single comb, just as we consider the Wyandotte and the Hamburgh as purely rose-combed breeds. But changes are for ever taking place in the Fancy, and long-established notions are apt at times to be upset. The Leghorn, for instance, has now a strong following in the Rose-combed Black, yet years ago when a fancier exhibited a Rose-combed Leghorn the new branch would not "go." I must admit that I prefer uniform general characteristics in a breed; but, in the past, variations have been recognised—to wit, the Rosecombed Orpingtons and the Rose-combed Dark Dorking, to mention only two—so to admit a rose-combed variety into a single-combed breed is not exactly novel. And, since rose-combed birds of the finest strains are apt to "sport" specimens with single combs, it is reasonable to presume that the reverse could happen. That being so, wherein lies the impurity of the variation? Granted that the multiplicity of breeds and their varieties is somewhat bewildering to the amateur, more especially when they resemble each other in so many points as do the Rose-combed Barred Plymouth Rock and the Cuckoo Wyandotte; but it is as well to recollect that the latter variety was never popular, and that for years it has been practically a dead letter in the Fancy.

## FANCY AND UTILITY.

BY W. W. BROOMHEAD.

THE writer of the letter on the above subject, which appears at page 447 of last month's ILLUSTRATED POULTRY RECORD, has adopted a nom ae p'ume that, in my humble opinion, is not exactly in keeping with the spirit of his communication. It is a very old story, that of the spoliation by the fancier of the useful properties of certain breeds of fowl; and "Exhibitor" adds nothing new in the telling of it. Once more are the Cochin and the Black Spanish brought to the front as examples of the great harm that the fancier has done to the noble industry of poultry-keeping. But, like so many other writers who have told the same tale, "Exhibitor" very conveniently omits to say anything of the numerous excellent breeds which the fancier has introduced since he discarded the ancient lights-breeds which have again and again proved their value when considered solely from the utility standpoint.

Granted that the Cochin has fallen out of the ranks for utility purposes, what of other breeds which have come into vogue since its decline? What of, for instance, the Orpington? In at least four varieties of this latter breed we have, when considered solely for table purposes, quick-growing fowls, those which mature early and, moreover, those which possess the much-desired white

skin and shanks. As layers, too, their record surpasses that of the Cochin at its best, while as sitters the Orpington hens have featherless shanks and feet, a distinct advantage over the "leggings" and "boots" of the old Asiatic breed even in its original form. Then, as a substitute for the White-Faced Black Spanish, which, it must be admitted, was a rare good layer of large, white-shelled eggs, we have the Black Minorca, which is a very popular breed among cottagers and farmers, who keep it purely and simply for the supply of eggs. And as a layer, both as regards quantity and size of eggs, the Black Minorca is equal to any Black Spanish of half a century ago. These are but two examples of the good which the fancier has done. Others could easily be ment oned if it were necessary.

It is said that a cleavage exists between fanciers and utility poultry-keepers. It must be admitted that there are ex remists on either side—fanciers who would never have a fowl about their premises if it were not for the pleasure of breeding up to some standard of beauty, irrespective of eggs and breast-meat; and "utilitarians" (it is a term of recent coinage), who cannot see any useful object in the beautiful when applied to the plumage of such ordinary creatures as fowls. But, after all, the percentage of such extremists is remarkably small nowadays. And the fact remains that during the last few years fancy and utility have been gradually blending with each other, so that at the present time it is quite common to find both of them being carried on at the same establishment.

When a positive assertion is made, it is the better when backed by proof. If proof be required, I can go fully into particulars. However, I think all that is necessary is to draw my readers' attention to the statements made by some of the most prominent breeders of utility stock of the present age, men whose names have rarely, if ever, appeared in a show catalogue among the lists of exhibitors, but who claim that their fowls can hold their own in the show-pen. On the other hand, it is not rare for strictly utility breeders to obtain their stock and fresh blood for breeding purposes from fanciers who have made their name in the exhibition world. I have no intention of stating names, since to do so might be misconstrued as a desire on my part to give certain breeders a free advertisement.

Then again, "Exhibitor" says, "It seems to be pretty certain that a combination of show-pen beauty with practical utility has never yet been attained in any breed." The "practical utility" may, perhaps, require some explanation; I may not have grasped its exact meaning. However, to say that the combination has never been attained in any breed is, to put it mildly, rather wide of the mark. Had the word "bird" been substituted for breed there might have been some excuse. But even then my experience, and that of others, has been different. To give one example of many with which I am personally acquainted: At last year's International Show, held at the Crystal Palace, a pullet belonging to a novice exhibitor secured second prize in remarkably strong competition. Yet that bird

was in full lay, and produced three eggs during the time she was penned at the event. Fowls from the same yard won several prizes during last autumn and winter, under different judges, yet the birds were in their laying season. They scored very high, when considered purely as fancy stock, several first prizes and specials going to them; yet their records, which have been strictly kept, prove that they are no mean layers. This is not an isolated case in any way, and the fact that the birds were the produce of a fancy strain which had been inbred for certain points of beauty did not interfere with their laying qualities.

Further, some of the choicest fatted fowls which have ever graced a show-bench or a salesman's slab have been the progeny of noted exhibition strains, bred from the same birds which have produced well-known winners. On the other hand, many a fine show specimen has been "picked up" in places where fancy stock is unknown. And if egg-producing qualities and table properties are not "practical utility," then, what is meant by the term? I agree with "Exhibitor" that "the fancier is always striving after fancy improvements." So far, so good. If he were not, he would not be entitled to be classed as a fancier. But to say that he does so "irrespective of economic qualities" is not, well, not what I have found during the years I have been connected with poultry. The fancier may not strive for the two hundred eggs a year hen. Many poultry-keepers who have done so are vet as far from their ideal as they were when they first "took to poultry." But the fancier is as careful to breed reasonable layers as is the most extreme "utilitarian," since the trade in "eggs for sitting" is an ever increasing one.

Mr. Tegetmeier is doubtless a great authority on poultry; nevertheless, I, for one, do not agree with everything which he has written or said in connection with poultry. And I am not alone in that respect. If it had not been for the fancier and his hobby, the poultry of this country, at least, would doubtless have been now what it appears to have been a century or so ago. The tancier has done more for the poultry industry than has the utility breeder, in that he has introduced many excellent and useful varieties and breeds of fowls. And if he has not increased to any great extent the eggproducing and meat properties, he has at least induced many to take up poultry who would not otherwise have done so. It is an acknowledged fact-is it not?-that "poultry-farming pure and simple," the keeping of fowls. solely for egg-production and table properties, rarely if ever pays in this country. Yet there are many people who make a living out of the poultry fancy solely by the combination which "Exhibitor" suggests should be "Probably ninety-five out of started without delay. every hundred birds bred for exhibition are only good enough for utility purposes." Quite so, but if the value of the remaining 5 per cent. eclipses that of the "culls," what of "practical utility" and "economic qualities"? Five in a hundred fit to show and ninetyfive fit for "utility," then why complain of the fancier and his hobby?

### SHOULD JUDGING BE OPEN?

To the Editor of the Illustrated Poultry Record.

SIR, -Though a discussion turning mainly on the best means for the prevention of deliberate fraud must of necessity be an unsavoury one, I was glad to read the suggestion in the article in your April issue that judges should give their opinions on the relative merits of the "closed" and "open" systems of judging poultry. While humans remain human, it is useless to attempt to deny the existence of rogues, and there can be no doubt but that from time to time judges under the present system receive the pen numbers of the exhibits of their friends, and deliberately place these exhibits above those of greater merit. It remains to be considered whether the adoption of the open system of judging will put an end to this form of swindling, and, if it does, whether it will not also have compensating disadvantages.

If anyone imagines that the introduction of the open system will stop grumblers from enjoying themselves after their peculiarly offensive fashion, I fear that they are greatly mistaken. I have no hesitation in saying that the poultry-exhibiting grumbler will continue to grumble and scatter accusations of favouritism broadcast until he wins every possible prize with every bird he exhibits, and even then he will most probably say that some special or cup or medal has been awarded to the wrong class for the benefit of the friend of the donor. But although the alteration, if made, would not reduce the amount of correspondence in the poultry papers by 75 per cent. by the elimination of the wails of the discontented, it would take one valuable line of defence from a dishonest judge. A judge who had put a bird belonging to a man with whom he is known to be intimate above a better bird would still be able to protest that he placed the birds according to his honest opinion of their respective merits, but he would no longer be able to say that he had not the vaguest idea as to whose birds they were.

The present system must stand condemned as a failure for the prevention of deliberate fraud, since not only can exhibitors send their pen numbers to a dishonest judge, but also any judge with the slightest experience of poultry can recognise birds that belong to his friends or that he has sold to valuable customers, and, if he is fraudulently minded, can act accordingly. On the other hand, circumstances are perfectly conceivable in which a judge would prefer not to know the owners of the birds. Suppose, for instance, that in a class there are two birds of almost equal merit, one belonging to a friend of the judge and the other to a stranger. Under the closed system the judge would decide strictly on the merits of the birds. But under the open system his position would be unpleasant. might be unfair to his friend's bird from fear of appearing to favour, or he might be influenced to a slight degree in the other direction, and, anyway, he would be unable to give the unbiassed consideration to the proper placing of the two exhibits that he would be able to give under the closed system.

There can be no doubt but that, if judges could not possibly be informed of the pen numbers of exhibits belonging to their friends, and if judges could never recognise a bird, the closed system of judging would be the better, since it would remove all possibility of a judge being handicapped in his duties, as before suggested. But, unfortunately, neither of these things can be prevented, and I am inclined to think that the open system deserves something more than a perfunctory trial.

It is certain that honest judges will occasionally be biassed one way or another by having the catalogue in their hands. But it is equally certain that a considerable amount of the deliberate favouritism of dishonest judges will be stopped.

The whole question is a difficult one, and I should be sorry to express a definite opinion as to which is the better system, but I shall look forward to reading the opinions of other judges and exhibitors.—Yours, &c.,

WILLIAM H. COOK.

St. Paul's Cray, Kent, April 11, 1909.

To the Editor of the ILLUSTRATED POULTRY RECORD.

SIR,—In the last issue of the ILLUSTRATED POULTRY RECORD there appears an article under the name of Mr. W. W. Broomhead, once more raising the question Should judging of poultry at our shows be open?—that is, I take it, should a judge be furnished with a catalogue of the names of persons who are exhibitors at the show at which he is to award the prize?

My friend Mr. Broomhead no doubt occupies a unique position as regards collating information upon general poultry topics which I have not the advantage to possess. But I must candidly admit my surprise that so popular a judge should be the medium of reviving a controversy which appears to me already a lost cause.

It was not many years since that the same subject was raised, and, if my memory serves me correctly, it was brought about by the Royal Agricultural Society, who permitted judges, in accordance with their usual custom, the use of catalogues in awarding prizes, but was ultimately discountenanced by the influence of the Poultry Club, under whose rules the show has since been held. I do not for a moment believe it is entirely Mr. Broomhead's own seeking that the question has been raised, but that it has been prompted by exhibitors who think the change may conduce to better and more consistent judging than the present system. What I most regret. is that the matter was not raised by the persons who feel most aggrieved, and that a petition for redress had not been drawn up in a concrete form and prosecuted in a business-like manner to the only tribunal qualified to deal with such a far-reaching change. This, I contend, should be the Poultry Club Council, under whose rules the majority, or a great part, of the shows are held and supported.

I think we should pause before any such revolutionary change takes place and satisfy ourselves if the ground of complaint against the present system is real or only illusory.

One case presented to us as a cause for remedy is that certain popular breeders are favoured by judges to the unfair disadvantage of the lesser lights in the Fancy.

If any reliance can be placed upon this assertion, it most certainly infers corruption on the part of the judge officiating. This would be a most serious indictment, and deserve the strongest condemnation.

But, taking this as a hypothetical case, would your readers and exhibitors generally believe that the open catalogue practice would be the only panacea for this state of things? I think not. On the contrary, it would simply increase the chance and opportunity, thus making the evil easier to commit.

Mr. Broomhead himself says, to use his own words, such complaints must be taken with the proverbial grain of salt.

I must also disclaim any sort of analogy between judging poultry and cattle, horses, or even dogs, as applicable or favourable to the argument.

I contend, therefore, all that has been written in favour of the change in the preceding article hangs upon incredulous statements and suspicion, which we are invited to accept on the score that the open catalogue judging will ensure equal treatment to all. Will it be tor better or worse?—Yours, &c.,

THOMAS LAMBERT.

To the Editor of the ILLUSTRATED POULTRY RECORD.

SIR,—During the seven or eight years I have been engaged as a judge of poultry I have never seen a catalogue with the names of the exhibitors until the judging has been completed and the awards placed on the pens.

If I had received a catalogue before judging began, would the awards have been different? Most assuredly not, except in one or two ininor awards where all the money prizes had been given to the same person, and other exhibits between which there was not a pin to choose had received "Reserve" or V.H.C. cards. In these cases I should now and then have given a prize to one of the latter, and have given the "deck-sweeper" a card.

Every judge has met with cases where blank equality has faced him in several birds in a class, especially where the class is a large one and competition keen. Where the difference between exhibits is of a marked character, no honest judge could do other than place the awards according to merit.

There are three points needed in a judge—viz., competence, conscientiousness, and candour or fearlessness. But if he possesses all three, while he may satisfy the majority of fair-minded exhibitors, he must never expect to please everybody or stop grumbling. The novice who does not understand all the "points" of a breed, the faddist who has made a craze of some particular feature to the exclusion or diminution of the rest, and, above all, the old hand and the "deck-sweeper"

who usually win and are sore if they are "out of the money," will never be satisfied.

I have omitted one other class, the man who is suspicious of everybody and believes in none, and who is usually himself not above suspicion. This is the being who likes to "get at" a judge where he can, and when he fails to do so imagines that another has taken his place.

Grumbling will never cease till we reach the millennium, and I very much doubt if "open judging" would reduce the amount of grumbling. It would place a severe strain on a judge's conscience to leave out of the prize-list the exhibits of noted men, the more so if they happened to be his personal friends. A strong man would be placed upon his mettle and would do it, and would take care to have his reasons for doing so, but the weak man would waver, and whenever there was an opening for favour would take it.

Open judging would not affect the best judges, and most of them would still go on the old lines and judge the birds, only referring now and again to the list. It would often be a useful help in finding out the "wrong 'uns," and exhibits from some yards would always be closely examined, for some exhibitors can no more keep from trimming and attempting to defraud than a kleptomaniac can be kept from pilfering.

Personally, I do not think that open judging would find favour with exhibitors. They would be more suspicious than ever, and a judge would need a nerve to give the chief awards to an exhibitor whom he happened to know well. His candour would be called into play more than ever, and his competence would be screwed up to concert-pitch. The part of judging I most enjoy is the explanation of my awards. It gives a chance to help the amateur, as well as to give the "straight tip" to others.

I should like to see the system tried, and the best openings are the large agricultural shows which provide interleaved catalogues, and where all the other classes for live-stock are openly judged. What, however, is needed more than open judging is the licensing of the judge at all shows held under authority. The most rampant evils are at the smaller shows, and also at some "club shows" where the selection of the judge lies with a small committee and not by a popular ballot of the members. Open judging, while not free from objections, as no human system can be, would place a judge upon his honour, and so is worth a trial where it may be had.—Yours, &c.,

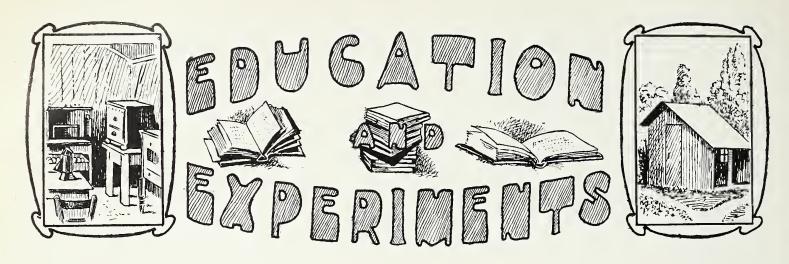
THOS. W. STURGES.

Marston Vicarage, Northwich, April 16, 1909.

### White Wyandotte Club.

The White Wyandotte Club has recently passed the following resolution:

That any member joining the club between the dates of April 1 and July 1 will, on payment of 7s. 6d. upon election, not be called upon for any further subscription until the following October 1 twelvemonth.



# THE POULTRY INSTITUTE AT CORNELL.

THE second annual "Farmers' Week" was held at the New York State College of Agriculture at Cornell University, Ithaca, N.Y., from February 22 to 27. During the first four days of the week a poultry institute was held in the buildings under the auspices of the New York State Department of Agriculture and the Poultry Department of the college. In connection with

the institute, the students in the various poultry courses conducted an educational exhibit and an exhibit of live poultry.

The exhibits were divided into two classes-namely, investigational and instructional work. In the former class were shown (1) birds which were undergoing various tests and particulars were given as to the data obtained to date; (2) eggs produced by various systems of feeding; (3) views of chickens suffering from white diarrhea, together with pictures of various special appliances; (4) preserved specimens showing abnormal and diseased conditions; (5) samples of different rations; (6) fowls specially bred for egg-production, table qualities, high vitality and low vitality; (7) capons of several breeds. In the second class there was a very good display of appliances, including cramming machines, drinking fountains, hoppers, packages for poultry and poultry products, model houses,

trap-nests, &c., and a large assortment of photographs and pictures. Altogether the exhibition was very successful as an educational display, and we should like to see a similar show held in this country, so as to give our farmers an opportunity of learning more about poultry husbandry.

The live poultry exhibit was held in the basement of the main building of the college. The purpose of this was purely educational, and an effort was made to have on exhibition as many of the different varieties of domestic fowl as possible. With this end in view, prominent poultrymen throughout the State were invited to send in a pair or trio of the variety of which they were specialists. In this way all the birds were of a high standard, and many were winners of blue ribbons at the largest shows in the State. In another part of the room the students exhibited the fowls which they had personally selected and prepared for the show. Later, these



THE AGRICULTURAL COLLEGE, CORNELL UNIVERSITY.

birds were judged by the students, and the men doing the best work in scoring were awarded prizes. In one corner of the show-room was constructed a duck pond in which were displayed a dozen wild Mallard ducks. The pond was fitted with a small beach and a background of evergreens to give it a more realistic appearance. A dressed poultry exhibit in another part of the room showed the manner of marketing fancy poultry in this country and in Canada.

The educational exhibit was located in another part of the building. The students in charge of this wore badges with the words "Ask Me" written plainly across them, so that anyone might feel at liberty to ask questions. These exhibits were arranged around the room and numbered, so that, by referring to a catalogue, an explanation of any one of them could be found. There were models of poultry houses and appliances, charts illustrating the results of experiments, photographs of diseased chickens, instruments used in investigational work, samples of feed rations, eggs

held at the college. There were talks on all phases of the poultry business, so that the farmer who only kept a few hens found it as interesting as the extensive poultryman who kept a thousand hens. Professor Rice, in opening the institute said that it would be the custom to have a new presiding officer selected by the audience for each session. Monday afternoon and Tuesday morning were entirely taken up with scoring and judging by Messrs. Jacquins and Lambert. Mr. John Robinson, editor of Farm Poultry, in a short address on Monday evening, spoke on the importance of poultry husbandry in the agricultural college. He said: "The time is soon coming when poultry will be taught in every agricultural



VIEW OF THE POULTRY EXHIBIT AT THE INSTITUTE.

from hens fed specially, besides specimens of egg and meat type fowls and high and low vitality fowls. A feature of the exhibit was a collection of posters, prize ribbons, and photographs of various poultry shows held in New York State. The Winter Course Poultry Club showed their collection of posters used in advertising the various meetings and debates of their club. The exhibit was intended to show the results of poultry investigation and to give the visitors an idea of what the college is doing for the poultrymen of the State.

The poultry institute was the most interesting ever

college in the country, and to fully appreciate the study it will be essential that the student shall have a thorough knowledge of the principles of agriculture." He urged the short-term students to take a two- or four-year course if they possibly could. Mrs. G. E. Monroe, the other speaker, told of her experiences in hatching and rearing chickens.

Mr. Curtis spoke several times during the institute, and described in detail his methods of hatching and rearing ducks. Mr. Curtis raises 40,000 ducks every year on his farm, and some of his methods are decidedly original.

The most important session of the week was held on Tuesday evening, with Mr. Graham as the presiding officer. He introduced Dean Bailey, of the college, who spoke on "Poultry Husbandry from the Standpoint of the Educator." As chairman of the Country Life Commission of America, the Dean has had an opportunity of studying agricultural conditions in other States.



A CORNER OF THE EDUCATIONAL EXHIBIT.

He told briefly of a commencement he had witnessed in the south, where the graduates delivered their orations by bringing upon the stage some piece of work they had done and explaining it to the audience. One girl brought on a broody hen and showed how to set it. "This may seem strange for a commencement oration," said Dean Bailey, "but a thing which is worth doing after you leave college is worth doing in college. The idea that poultry has no place in the curriculum of a college is entirely wrong. Poultry has always been given a prominent place at Cornell, and it will be made still more prominent if the poultrymen of the State desire it." He pointed out the rapid growth of the college, with its present enrolment of 815 students, and said it would soon be necessary to have larger buildings. He asked for the co-operation of the poultrymen in this matter, for a poultry student requires just as much room, and just as fine apparatus, as any other student in the university.

# CARBONIC ACID GAS IN INCUBATORS.

WE have already referred in this section to the belief, which is held by certain experimentalists in Canada and America, that the presence of carbon dioxide in the air surrounding the eggs during incubation is beneficial, and not, as formerly considered, baneful. Mr. R. T. Terry, the Tasmanian Government poultry expert, is the latest to be converted to this belief, and he expresses this opinion in a series of articles which he has contributed to the Agricultural Gazette of Tasmania. It appears that the same fact has been instrumental in bringing about this change of opinion in the case of Mr. Terry as with others-namely, the high percentage of carbon dioxide found in the air around the eggs when undergoing hatching by natural means. The arguments which are brought forward are important, and they are made the most of by the author. That there is a cause for the high rate of dead-in-shell is undoubted, but whether this is due to the lack of carbonic acid gas is not yet established, and reading over the résumé of Mr. Terry's articles, as given in the Agricultural Gazette of Tasmania, one wonders whether even Mr. Terry himself really believes in the beneficial effect of carbon dioxide in incubation to the extent which he would have readers understand. The subject of artificial incubation is of such vast importance to all poultry-keepers that we have no hesitation in giving the following somewhat lengthy quotations from the résumé to which we refer above :

He considers that there is far too free a circulation of air in them, and instances natural incubation, which is



TABLE POULTRY EXHIBIT AT CORNELL UNIVERSITY

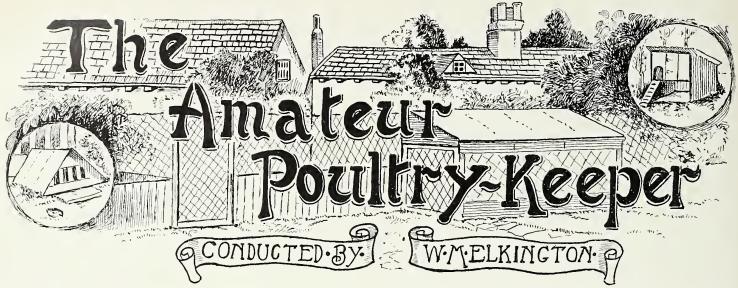
not the domestic hen possibly set on eggs in a nest shaped and constructed of materials that we consider right, but rather the wild birds as they would incubate their eggs. Impure air, as is generally known, contains a large amount of carbonic acid gas, or what is scientifically termed carbon dioxide. At first sight, especially to the lay mind, it might be thought that this would have a bad effect on the growing chick. The reason for arguing in this manner is that human beings and animals who breathe through the lungs aerate or purify the blood through its contact with the air; the more oxygen that air contains the better the condition of the blood, which means the health of the human being or animal. But it should be borne in mind that the embryo that is contained in the shell of the egg during its development is not breathing through its lungs. In animals which bring forth their young alive, it is found that the embryonic blood is charged with carbon dioxide. The amount contained in the fætal blood would be found to be in great excess to that in the ordinary blood in the adult animal, which would tend to decrease the circulation of the blood in the fœtus. Owing to the slow circulation through the placenta, the fœtus is practically what may be described as half-suffocated. Now, why should not the same laws be at work in a natural or artificial incubation, although the development takes place outside the hen's body? It will be shown later on that the eggs are surrounded by a large amount of carbon dioxide, that is, if the eggs are hatched in a natural manner by a hen. The point to be impressed is this: that carbon dioxide would have the effect of decreasing circulation of the blood, rendering the action of the heart slower.

The writer goes on to say that carbon dioxide is found in large quantities under the hen, and, as a result of repeated experiments, it has been learnt that the quantity under the hen is three times greater than that in the incubator, although the latter contains a much larger number of eggs. Besides affecting the development of the embryo, it is a great factor in another direction to the successful hatching of chicks. This carbon dioxide, in conjunction with moisture, has the effect of decomposing, or rotting, as it might be more familiarly termed, the shell of the egg, thus rendering it an easy matter for a fully developed chick to break out. During his experiments, and also when visiting farmers who had unsuccessful hatches, Mr. Terry was impressed with the large number of fully developed chicks dead in the shell, and it was some time before he got the idea of the over-ventilation. The thought once started, he used to investigate on the data given him by the operators. This led to further experiments by himself, and he is now convinced that the bulk of the chickens that are found dead in the shell die simply from exhaustion. Out of the large numbers he has examined, in nearly all cases they showed that the birds had been striking at the shell; while in several instances their vigour and sustained effort had resulted in extravasated blood around the head, especially base of beak and upper portion of the neck. This was most noticeable in those incubators which did not contain any water supply; but in one of the same machines, containing the same class of eggs, but worked in a cellar, the result was altogether different, there being practically no dead in the shell. The atmosphere in the cellar was very bad indeed, and if the burning of the

lamp is taken into consideration, the atmosphere must have been far from ideal for adults inhaling air through the lungs, and this alone was thought very strong evidence that the embryo does not require the same air as the adult. Further, it is the custom in those countries, such as America, which have given some attention to modern incubation, to build the incubator houses partly sunk in the ground. These houses would have a tendency to retain carbonic acid gas, but we have to go a step further and consider whether the carbonic acid gas is emitted from the hen's body, from the eggs, or from both. Mr. Terry was inclined to think from both. Experiments carried out in a rubber nest, with a hen sitting on china eggs, showed the amount of carbonic acid gas contained in the air to be practically the same quantity as that in a similar nest in which eggs were undergoing incubation. It has also been found that, contrary to what one would suppose, the amount of carbonic acid gas does not apparently increase with the development of the embryo. It may be thought that great stress has been laid on this matter—carbon dioxide-in its relation to artificial incubation, but Mr. Terry considered that there was a big field for research.

To Mr. Terry it seems that in future we shall have to introduce carbon dioxide into the incubators in some form-just what form it should take and what quantities he is not prepared just yet to state. There seems to be good effects brought about by a more or less saturated atmosphere in the incubators when brought in conjunction with carbonic acid gas. Experiments so far, have gone to show that the chicks hatched from those machines in which the fresh air first passes through a damp cloth, or the machines which contain damp sand, are larger and more vigorous than those from dry machines; but it may be that the increased moisture has the effect of improving the development of the fluff, although when a number of chicks were weighed from the wet incubators they were found to, be heavier than those from the dry. This could be easily accounted for by absorption, as we all know that a large portion of the bodies of either animals or birds is composed of water. The advice is tendered that much ventilation should not be given to the eggs till after the sixth day; to have water or moisture supplied in some form during dry weather until within about three days of hatching. Do not place the incubator in a dry, sunny, draughty room; a cellar is considered to be an ideal position. Even with those machines which are said not to require moisture, it is advised that a damp (not a wet) sponge or cloth be placed on the bottom of the machine during dry days.

That this question is a vexed one may be gathered from the following quotation from the report issued by the Connecticut Stores Station for 1907: "Whether carbon dioxide is essential to a perfect hatch and vitality in a chick is still an open question. This work is not complete enough to settle the question, and there is very little data to be found on this subject. It is true that there is a much larger percentage of carbon dioxide under sitting hens than in an incubator. It is also true that hens hatch chickens with greater vitality than an incubator."



### A Word About Back-Yard Runs.

Every year we hear some complaint about the danger to health arising from small poultry-runs close to human habitations, and I am afraid these complaints are justified in many cases by the utter carelessness and disregard of simple precautions on the part of a number of back-yard poultry-keepers. They are, no doubt, but a small minority, but their very existence prejudices the reputation of back-yard poultry-keepers as a whole. About two years ago, when there was some serious talk about introducing by-laws to put a stop to back-yard poultry-keeping in a certain town not far from London, I was in correspondence with an enthusiastic amateur in that locality who, though himself a back-yarder, readily confessed that the complaint of the authorities was perfectly reasonable, and that a dozen or more careless people were bringing suburban poultry-keeping into bad repute by their neglect of the elementary principles of cleanliness. I was told of open runs that were never scraped or dug over from one year's end to another, which in winter became a quagmire, and in summer a mere dust-heap, and I was assured that many of these were within half a dozen yards of open doors and windows. I even heard of insect pests becoming such a plague that they were actually infesting the dwellinghouses, and I think no one can deny that if this is the way back-yard poultry-keeping is carried on the persons responsible for such conditions thoroughly deserve to be prosecuted by the local health authorities. We who are continually preaching the better methods of back-yard poultry-keeping and those who are carefully putting them into practice can have no sympathy whatever with people whose fowls are a nuisance to the community and a menace to public health, and it is in our interests to rid our ranks of the careless ones before the authorities wake up and prohibit back-yard poultry-keeping without discrimination.

### Grass Runs.

We are all partial to grass runs, because they look better than ashes, gravel, or bare earth, and, no matter how small they may be, we fondly imagine that they provide our fowls with necessary greenstuff. Poultry will eat grass of any kind when there is nothing else available, but it is not a good plan to allow them to rely upon this in a small run, and a few cabbage or lettuce leaves from the garden should be provided periodically. But, on the other hand, many amateurs find their grass runs too large, and they are puzzled to know what to do with the grass. Cattle and sheep do very little good, as a rule, in poultry-runs, but a pony is a much more accommodating beast, and I know some amateurs who graze their pony in the poultry-runs all through the summer. Goats are even more useful, because their milk is of value for feeding purposes, and one can feed a goat on a small establishment where there would not be sufficient for a pony. In any case, it is advisable to keep grass in a poultry-run pretty short during the summer. As it soon gets trodden down it is difficult to mow and make into hay, and unless it can be grazed the best plan is to run the scythe over it every two or three weeks. The short crop when dried will come in useful either for feeding other stock or for nests and egg-

### What is an Amateur Fancier?

Clubs and individuals do not appear to agree upon the definition of an amateur and a novice. Some hold, and with good reason, that there should be several grades of novices, for to describe a man in such a way because he has never won a first prize at the Dairy, Palace, or Club Show, even though he may have been exhibiting for 20 years, and to class him in the same category as a person who has only just commenced poultry-keeping, is utterly ridiculous. In the Novice Competition promoted by the Partridge Wyandotte Club a novice is described as one who (1) is not engaged solely in poultry-farming; (2) who has never employed and does not employ a regular skilled poultryman; (3) who has never been employed as a poultryman; (4) who has never won a prize value 15s. at any show and with any breed of poultry, selling classes excepted; and (5) who is not related to or connected with any non-novice fancier, unless possessing a separate establishment and approved by the committee. Stringent regulations like these give the real novice and amateur a chance.

### What Becomes of Broody Hens.

Many amateurs buy broody hens as they require them, and after rearing their broods the question invariably arises as to what is to become of the hens. Some people keep them on for laying, with varying results, whilst others sell them at a low price either for laying or for table. I generally buy about a couple of dozen broody hens every year, cross-breds for the most part, at prices ranging from 3s. to 4s. each, and I find the most economical and profitable way to deal with them when their maternal services are no longer required is to eat them, unless they can be sold for laying at 2s. 6d. a head. It certainly pays better to consume them at home than to sell them for 1s. 6d. or 2s. each for the table, and a twoor three-year-old hen is not an unsavoury dish when properly cooked. Though the bones may be old the flesh is generally new, and if the birds are boiled for three or four hours only a connoisseur would distinguish them from young birds. Some people boil them first and then brown them in the open, but in that case the skin becomes dry, and the flesh is not so juicy. No amateur need fear that an out-of-work broody hen is not good enough for his table after she has been fattening up whilst running with the chickens.

### Our Competition for Amateurs.

If every amateur poultry-keeper who prides himself upon the results achieved during 1908 becomes a competitor for the £2 2s. prize, details of which will be found on another page, the event will be a huge success. It should be remembered, however, that the prize is not offered for the most phenomenal result, but for the best account of an amateur's experiences in poultry-keeping.

### THE AMATEUR'S GUIDE FOR MAY.

A LATE spring has its advantages as well as its disadvantages, but whatever the weather may be, poultry-keepers can never afford to wait until it improves, and those who have postponed breeding operations until now will find themselves late next laying season, just as they are late now. The only breeds to hatch at the present time with any chance of securing development in time for laying next winter are a few of the smaller quickgrowing kinds, and particularly Leghorns and Anconas. Go for utility strains by all means if your object is eggproduction. They are not only much more reliable as layers, but they are not bred to the same size, and they develop and come into profit earlier.

In many yards breeding is already finished, and those who keep exhibition stock are breaking up the breedingpens in order to keep their birds fit for the summer shows. It is a fact that amateur fanciers are always handicapped through inability to keep their few stock birds in fit condition for showing after the breeding season, and with some of the light-coloured breeds it is

next to impossible to devote them to both purposes. With others, however, there is a fair chance of winning a few prizes after the breeding season is over, and in such cases the best specimens should be put under cover at once, for spring showers and sunshine make havoc with the plumage. Hens naturally suffer more than cocks in the breeding season, and the only plan to get them into fairly good condition is to pluck out the broken feathers on the cushion and keep them confined in an airy and well-lighted shed or outhouse, letting them out when the sun has gone down in the evening or on dull days.

The amateur will also find it beneficial to pay a little attention to the toilet of his show birds just now. A wash will improve them, whether they be white or black, and the legs should be scrubbed and dressed with paraffin and sulphur if there is any sign of scaly matter. A little sweet-oil rubbed on the comb will improve the texture, whilst white lobes may be sponged with lukewarm milk and, after drying, dusted with violet powder. These are preliminary preparations whose value will be fully appreciated later on.

Attention must now be largely concentrated upon bringing on the young stock, and those who have limited accommodation naturally experience more difficulty in getting birds to grow than those who can make use of an unlimited range. The only way to overcome the difficulty is to use food that will stimulate growth. Meat is an absolute necessity for young fowls in confined runs, and it must be given fresh, so that it is no use buying a large supply at this time of year with the idea of making it last a week or more. I much prefer cooked lean meat or lights to green bone for young stock, as the latter frequently causes scouring.

Another important point is to separate the sexes a soon as possible after the birds have been weaned. Cockerels of some of the more precocious breeds, when little more than three months old, begin to make themselves a nuisance, and if they are left until they are a little older three or four young cocks will worry the life out of a flock of pullets, and do a great deal of harm in checking their growth. It is easy to distinguish the sexes at an early age in these precocious breeds, so the work of separation should be done without delay

Those who have a few early chickens that can be utilised for the table should remember that there is no time like the present for marketing plump young birds. Some amateurs do not like the idea of killing chickens little more than three months old, but they must remember that by keeping their birds for another couple of months, when there will be a comparative glut in the market, they will probably realise less money. Make hay while the sun shines, and sell your chickens whilst prices are high. The value realised will depend entirely upon the quality, and it is useless killing the birds unless they are really plump. But it is easier to feed chickens for the table between the ages of three and four months than later on, when they are growing a lot of feathers.

Beware cf overfeeding laying hens just now. Much

of the food utilised to supply heat in winter is no longer required, and, if given, would merely tend to build up superfluous fat. A summer diet for hens should be light, both in character and in quantity.

# POULTRY-PRODUCTION FOR THE HOME.

BY A. T. JOHNSON.

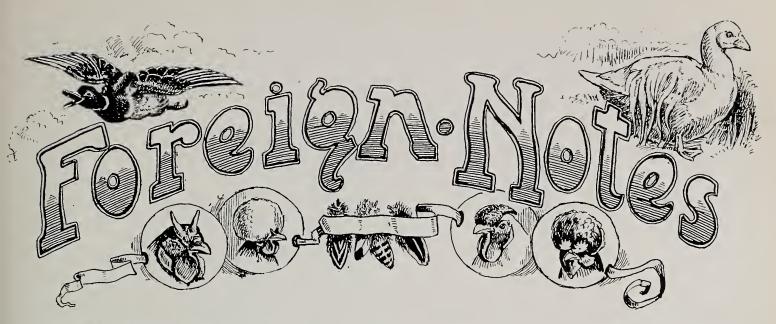
IF there is one subject upon which we poultry-keepers are in entire agreement with one another, it is that the production of fowls and eggs for the home table pays better than any other branch of poultry-keeping. There are many good reasons why this should be so. In the first place the food, or a part of it at least, does not have to be paid for. Then a few birds will get more individual attention than those in larger flocks could possibly receive, and it is a well-known fact that the smaller the flock the greater the profit, or return, per bird. Of course there are, we know, some very unprofitable hens kept for the putpose of "eating up the scraps" and turning them into eggs. But these household refuse-destructors do not always do what is expected of them. They eat the scraps, it is true, and as much more as they can get, but only so long as they are not put to the trouble of working for it. They grow mordinately fat, become diseased, and develop bad habits, especially that aggravating one of never laying except for a short period when eggs are cheap. However, I like to think that such degenerate flocks are growing fewer and that their total extinction or, rather, that of their careless or ignorant owners—is only a matter of time.

In discussing this question of the home poultry, or that kept entirely for consumption in the household, one may, for convenience, divide the subject into two parts-viz., (1) Hens which are kept in quite a small enclosure where chickens cannot be reared; (2) those which have the good fortune to occupy a more extensive area where rearing may also be indulged in. Now, there is not very much that is new to tell the average reader of this magazine upon keeping laying hens in small runs, but a word of advice may here be offered on attempting to rear chickens in a very limited space. There are many people at this season who would like to bring up a brood not only with the object of supplying the table with young birds later on, but with the desire to supplement the old hens in late summer with pullets of one's own rearing. Both objects are estimable enough, but unless there is a grass run that can be given to the chickens, or some other place away from the old stock and proportionately as large as that occupied by the latter (for a growing chicken will foul the ground as quickly as an adult), there is not much chance of success. Chickens so soon tire of the same ground, and even if they are not actually "sick" they will often become dejected and diseased from mere monotony. For that reason rearing in confined areas is not recommended, and it is even worse to run a brood with the adult stock. Where space is

limited, too, it generally means that other houses are near, and neighbours keep cats, which of all pests are the very worst for killing chickens. Sometimes it may happen that a kitchen garden or lawn can be given to the birds while very young—the hen being cooped—but here again the cat plague is likely to cause mischief, and the problem as to what to do with the brood when it is about eight weeks old must be faced. The difficulties are so great and the chances of success so remote that I never recommend anyone to attempt rearing in very limited areas.

The question is often asked: How many chickens can I rear on a given piece of land? And it is one that cannot be answered in a word. There are people enthusiastic enough to start this kind of poultry-farming in an attic; others seem to think that chickens can be reared when allowing only about a square foot per bird. But I have already touched upon this part of the subject, and space will not allow me to say more than this, that chickens during the period of growth—say, up to four months old -should, if confined, have at least three changes of ground to run over, the combined areas being equal to about one hundred square feet per bird. The more fortunate poultry-keeper, who has what practically amounts to an unlimited run, need not worry about such measurements. Within reasonable limits he will give the chickens as much liberty as they care to take.

There is a popular belief nowadays that one or another of our best-known breeds-Buff Orpington, for example —is the best for supplying the home table, and without wishing to injure the splendid reputation which the breed mentioned or others have won for themselves under some circumstances, I do think the domestic poultrykeeper might often do better if he went in for a fastgrowing first-cross. There 's probably nothing to equal the Black Minorca as a layer for covered runs or very small enclosures, but when it is desired to have table fowls as well I have always found a blend most satisfac-Among the many good cross-breds that suit the grower of home poultry the Houdan-Orpington (buff or black) deserves special mention. The chickens are very hardy, grow fast, and make good table fowls. Houdan-Minorcas are also a first-class cross which will do well under almost any circumstances. The Houdan-Wyandotte (the latter may be any colour so long as the strain is a prolific one) can also be recommended. While the Rock still maintains its reputation as a fast grower in its early days, it does not seem to be such a good layer as it used to be (or is it that other breeds have improved while it has stayed where it was?), yet an infusion of Houdan blood puts it very nearly in the front rank of all-round poultry. I hope it will not be thought that I am influenced by mercenary motives in recommending the Houdan! As a matter of fact, I do not keep the breed, but there is not the slightest doubt in my mind that the Houdan, as a sire for light or heavy breeds-the object being to produce generally useful stock-has qualities which are unique. Is there any other well-known breed that will impart the prolificacy of the best Mediterraneans into our modified Asiatics and at the same time improve their table properties?



#### Death of Mr. Philander Williams.

A notable figure at the last annual meeting of the American Poultry Association at Niagara Falls was Mr. Philander Williams, who was one of the organisers of that society thirty-five years previously, and who, although eighty years of age, took the greatest interest in the proceedings, delivering a most interesting series of reminiscences. News has just reached us of the death of Mr. Williams on March 20, for which we were almost prepared by the fact that he was too ill to attend the gathering of veteran poultry-breeders, held during the Boston Show, but everyone will receive this announcement with deep regret, as he had been for so long linked closely and so honourably with this pursuit. For some time he acted as President of the Association and also of the Massachusetts Poultry Society, and his services were frequently in request as judge, more especially of heavier breeds; Brahmas were his chief favourite. We note that in our copy of the first edition of the American Poultry Standard, published in 1874, Mr. Williams's name is given as one of the trustees of the American Poultry Association.

#### Mr. W. A. Kock.

In December last we announced that our esteemed Danish correspondent, Mr. W. A. Kock, had been commissioned by his Government to pay a visit to America in the spring of this year for the purpose of studying some of the conditions relating to poultry-keeping. Mr. Kock sailed from Copenhagen on April 15, and by the time these notes are read should have reached New York. He intends spending about a month in the Eastern States, but will not get further West than Buffalo. He hopes to make the personal acquaintance of a number of American breeders and instructors, to whom we commend him most warmly.

#### Rumpless Fowls.

Fowls without caudal appendages are known in almost every country, but they are regarded as freaks, and do

not command much favour. Breeders have frequently said that they are specially hardy and prolific, but whether this is comparatively so we do not know. M. Louis Vander-Snickt in *Chasse et Pêche* lends support to this view:

All who have reared tailless chickens (sans queue) have stated that early maturity and laying are much augmented; we have ourselves observed the fact that the chickens of a tailless Bantam and of an Antwerp Bantan were twice as lively before hatching than ordinary embryos. It is long since M. Geoffrey Saint Hilaire explained this phenomenon by the law of compensations. In effect, the bulk and the muscles of the missing rump go to support the other parts of the body. The food which would otherwise be used to form feathers is utilised by the flesh, as the tail and its supports comprise a considerable percentage of the total bulk of the fowl.

If this be correct, rumpless fowls and naked necks should become popular.

#### Against Trap-Nesting.

That trap-nesting can be overdone cannot be questioned. American breeders, however, have been long in showing the opposite side of the shield, if there be one. Mr. W. A. Sherman, writing in the *Country Gentleman*, condemns trap-nests utterly, too utterly, we think, for the system has a value. He utters, however, a necessary warning:

Certain it is that the man who buys trap-nest stock for farm purposes will be unable to give the offspring the same sort of environment in which the ancestral records were made. If confined to pens and yards they cease to be truly *farm* poultry. If they secure a large part of their living for themselves, as profitable farm fowls will during a large part of the year, they will moult in natural manner and will lay more or less according to season, weather, pasturage, freedom from lice, &c. There will be a hundred factors entering more largely into the case than the fact that their granddam, under forced draught, was crowded past the 200-egg limit.

#### FRENCH NOTES.

(From our Special Correspondent.)

#### International Egg-Production.

An estimate has been made as to the approximate number of fowls and production of eggs in several countries, from which the following figures are quoted:

TT 10 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		No. of Fowls.	Egg-Production.
United States of	America	233,000,000	862,540 tons.
France	• • • • • • • • • • • • • • • • • • • •	00'	270,000 ,,
England	• • • • • • • • • • • • • • • • • • • •	25,000,000	125,000 ,,
Denmark	• • • • • • • • • • • • • • • • • • • •	11.000,000	55,000 ,,
Belgium		6,000,000	30,000 ,,

From this table it would appear that the average production in England and France is greater than elsewhere.

The consumption per head of the population is said to be as under:

Germany	• • •	 127 es	ggs per	annun
France		 118	,,	,,
England		 97	,,	**
Belgium		 91	••	,,
Holland		 - iò	.,	",

### Forthcoming Exhibition in Paris.

From June 3 to 7 next La Société Nationale d'Aviculture de France will hold an International Show in the Tuileries Garden (Terrasse de l'Orangerie), Paris. For particulars apply to the Secretary, 34, Rue de Lille, Paris.

L. JACOT.

### DUCK-RAISING AT LAPLAIGNE.

THE table poultry shows held in connection with the Smithfield Club in 1899 and 1900 embraced classes for foreign fowls, which proved to British farmers and others that quality of flesh is ever kept to the fore by French and Belgian breeders, and did much to encourage that improvement which has marked this branch of the poultry industry during the last decade. Among the birds displayed were Laplaigne ducklings, small in size but lovely in quality, with abundance of flesh, delicate in skin and light in bone. The report of those who purchased these specimens was that in flavour they were very fine indeed. In size they were



[Copyright. DUCKLINGS ARE FOND OF NESTLING ON MANURE HEAPS



[Copyright. VIEW IN THE VILLAGE OF LAPLAIGNE.

much below our English birds, but on the Continent quality is regarded as of first importance, whilst with us size is given a relatively higher position. With a view, therefore, to placing before our readers information respecting these Laplaigne ducklings and the methods of production, a representative of the ILLUSTRATED POULTRY RECORD recently visited Belgium, where he had the advantage of the company of our good friend and correspondent, M. Louis Vander-Snickt. The following are the notes of his observations, and the illustrations which accompany them were specially taken for our pages:

The great province of Flanders formerly embraced much more than the sections now forming the Kingdom of Belgium, for a considerable portion of Northern France, including the City of Lille, was Flemish, and in some of the rural districts the people speak that tongue. Hence national boundaries are arbitrary, the result of war and marriage and treaty. We find, therefore, that similar conditions prevail, that habits and customs and methods are the same both in Southern Belgium and Northern France. Whatever may be the frontier regulations and the Customs restrictions, the environment and people do not differ. Laplaigne is just on the borderlne, the commune which touches France. Its station, Bleharies, is the first in Belgium on the branch line from St. Amand to Tournai. Almost within sight is the site

of the field of Fontenoy, where was fought one of the great battles of the eighteenth century. From the station we cross the River Escaut, as the upper reach of the Scheldt is called, and are in Laplaigne. Its name is indicative of the nature of the land—a great plain many miles across each way, well watered, and ideal for duck-keeping. Much of it consists of water meadows, a large portion of which, as at Oudenarde and Huttegem, are flooded for a part of the year under communal control, enriching the soil by deposits and preparing it for the

ON THE OPEN FIELD heavy grass crops obtained there-

from. Through the fields are water-courses.

From Laplaigne about 100,000 ducklings are dispatched annually, the greater part to Lille, Roubaix, and the manufacturing centres of Northern France, as well as to Brussels. The prices obtained for these are high. At the latter end of March they were realising, wholesale, 8fr. to 10fr. each, but this year they are scarce and dear,

owing to late hatching as a result of the cold, unfavourable winter and spring—eggs having been later than usual. The usual price is 14fr. the couple, 5s. 7d. each, which is excellent for birds seven weeks old. The large demand keeps rates at that level. The breed, if it can be so called, is distinctive, but external characters are not very defined. The great majority of the ducks are parti-coloured, black and white, but not a few show a

buff tinge. They have cream-coloured bills and legs, the latter of which are much lighter in hue than the orange of the Aylesbury, which are found not to be antagonistic to pure white flesh and skin. These birds are very quick growers, as they can be raised to a killing size in seven weeks. They are hardy in the extreme. Moreover, they can be reared all the year round. They do not attain the weight of other Belgian breeds, such as the Merchtem and Huttegem, but make up for that by great delicacy of flesh.

Everyone appears to rear ducklings. They are to be met with everywhere. As the water meadows are communal, every farmer or occupier, large or small, has a right to put out his birds. Monopoly cannot concentrate the work or the profits in few hands. Naturally some of the breeders operate on a larger scale than do others. Notable among these are three brothers named Drouillon, one of whom exhibited at Smithfield in 1899. He rears annually about 10,000 birds. He combines inn-keeping with the duck business, and is evidently a prosperous man. From the fact that he is building a large fattening-shed, which will be divided into several compartments, it may be regarded as certain that the ducks mean much to him. At the time of our visit four men were engaged in the work in addition to himself and daughter.

"Needs must" often explains progression. As a rule, Belgian peasants do not believe in artificial



DANCING FOR WORMS.

[Copyright.

hatching. Conservative in the extreme, they seem to think that what has been should be for ever more. At Huttegem a breed of fowl has been evolved, which sits early and often. Around Laplaigne the type of fowl kept is light and active, largely Braekel, which could not be depended upon as sitters. Under these circumstances, the duck-breeders have gone in for incubators. This is the first instance we have come across in Belgium where

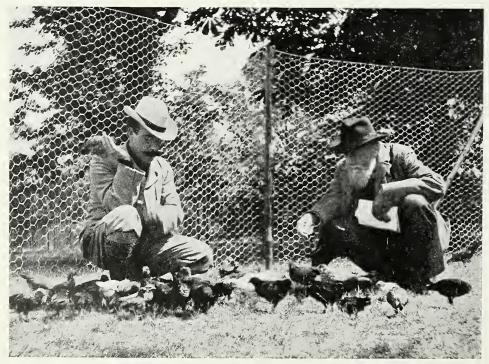
those appliances are adopted generally in a district. The advantages, however, are so evident that we may fairly anticipate that the system will gradually but surely extend. In fact, if breeders are to maintain and increase their operations in accordance with opportunities, it must be so. The other arrangements made are simple in the extreme. The only thing which may be regarded as special is the provision of shelters, which are built in two or three ways. Some are simple hurdles, through which straw is thickly laced, and when formed into part of entire squares they afford splendid protection against wind and sun. Others are frames in shed shape, with top and sides and back packed with straw, mainly for young birds.

The system of rearing adopted differs in several essential features from those met with in Britain and America, in that the birds are given, after the first few days, their full liberty and even access to water. There is nothing in the shape of dry raising, as they go into the water nearly all the time, save during the final stage of fattening. We noticed a temporary enclosure by the side of a water-course for ducklings from a week to a fortnight old. This consists of low hurdles providing a space of about ten feet square of earth and water; the birds were all the time busily engaged in finding that natural food which is regarded as necessary to their growth. For this nothing can be better than a bank-side, as many duckrearers know. What they really do obtain would be a very valuable observation, and perhaps might guide us to a better system of feeding. After they are two weeks old all restriction is removed, and then the birds can wander at will.

In the December issue of the ILLUSTRATED POULTRY RECORD (pp. 170-172) was given an account of the simple method of rearing ducklings adopted by Mr. Peter Walsh, in which no artificial heat is used. Such is also the practice at Laplaigne. But the ducklings evidently appreciate warmth, for at several places they were found snugly ensconsed on beds of manure, as revealed in one of our photographs. Happy indeed they seemed to be.

Experience all over the world has proved not merely the importance of, but the necessity for, animal food in rearing ducklings. Throughout Belgium and Northern France worms are regarded as most valuable for this purpose. It is a strange sight to see the peasants hunting for the succulent creatures to feed their ducklings. One method is to drive a stake into the ground and shake it well, which causes the worms to come out, when they are seized and transferred into a pail at hand. Another is shown by a picture. Dancing on the ground has the same effect, and the bevy of ducklings make short work of the worms as they come on top. The action is instinctive, as they need no teaching. However young they may be, let anyone commence operations, and they run eagerly to share in the feast. But at Laplaigne worms are becoming scarce.

During the earlier stages of growth the food supplied is usually in the form of paste, made from crushed wheat or buckwheat meal, mixed with cooked potatoes and a little meal. When they are fattening, the mixture is the same, but, in addition, some steeped whole buckwheat is supplied, as that is said to give the flesh firmness. They are given all they care to eat.



The figure on the right is that of M. Louis Vander-Snickt, of Belgium, who accompanied our representative during his recent visit to the Continent. He is Editor of "Chasse et Peche," and a well-known authority on poultry-keeping.



#### Production in Natal.

It is evident that poultry-keeping is growing in Natal. The annual statistics for last year show a falling-off in imports of eggs to the extent of more than 30 per cent. In fact, the colony is now almost providing for its own needs, as the total value of imports last year was only £5,820. As is the case in Europe, prices vary very much, ranging from 8d. to 9d. per dozen in September to 2s. 6d. per dozen at Christmas. It should not be long ere Natal is able to export a considerable surplus.

#### Another Twelve Months' Laying Competition.

The South Australian Journal of Agriculture says that an egg-laying competition was arranged to commence on April 1, extending over twelve months, at the Government Poultry Station, Roseworthy Agricultural College, for which 112 entries had been received—a record for that colony. As six birds are in each lot, 672 pullets will be in competition. £65 is to be given in prizes, the awards to be based on the values of the eggs laid.

#### Artificial Incubation in Australia.

Mr. G. Bradshaw writes a most interesting article—which is to be continued—in the February issue of the Agricultural Gazette of New South Wales, on Artificial Incubation, in which it is stated that the first of the machines introduced into that colony was a Christy's Hydro in 1879. From what he says, American incubators are chiefly used there, which is due in the first place to the high prices at which the best English incubators were sold until five years ago. The agents of one of the great American firms sold a thousand machines in a single year.

#### Mr. F. W. McEwan.

Delegates at the Reading Poultry Conference of 1907 will remember Mr. F. W. McEwan, of Natal, who,

whilst taking no important part in the proceedings, was a diligent attendant. In a description of his place at Umkomaas the South African Poultry Journal says:

In all Mr. McEwan has a farm of 200 acres, with splendid, fertile soil, and the luxuriance of his various crops of lucerne, maize, &c., is proof of the hard work he devotes to his place and stock, for he is without any coloured labour to assist him in his arduous duties. Mr. McEwan has established for himself the great reputation of the leading Natal utility poultry-farmer, and justly so, for Durban Market is well acquainted with the quality and size of the eggs from this source, whilst many parts of South Africa know the value of stock from this yard; hence the magnificent profits shown in Mr. McEwan's books.

#### Canadian Embargo Removed.

An announcement was made in our February issue that the Canadian Government had prohibited the importation of live poultry from several of the States in the American Union. After two months this embargo has been removed, and the ports are now open. So far as we are aware, no particulars have been published as to whether there is any evidence that poultry can convey foot and mouth disease, which was the reason adduced for the prohibition, or whether the prohibition has had the desired effect. In the interests of poultry and stock-breeders everywhere it is desirable that such information should be forthcoming.

#### Progressive British Columbia.

The Journal of the National Poultry Organisation Society states that the Minister of Agriculture for this colony has purchased a special edition of four thousand copies of Mr. Edward Brown's "Report on the Poultry Industry in Denmark and Sweden" which are intended for distribution at Farmers' Institutes during the coming season. The object is to bring before the farmers of British Columbia the importance of co-operation in marketing of poultry produce, of which system little Denmark is the best European example.

### THE CANADIAN POULTRY INDUSTRY.

BY WALTER JAMES BROWN,

Agricultural Editor, "Toronto Globe," Canada.

(Continued from page 444.)

A FEW years ago the Dominion Department of Agriculture established throughout the country what were called "poultry fattening stations." These were conducted by practical farmers under the instruction and supervision of specialists employed by the Government. The stations were used for purposes of illustration, and were designed to teach the people of the immediate vicinity what kind of poultry should be raised, how the birds should be grown and fatted for market, and the best methods of plucking, dressing, and packing. To the success of this effort may be attributed much of the interest manifested in poultry-raising, the improved condition and appearance of dressed poultry on local markets, and the increased prices obtained for the product. As already suggested, a great deal of work in this direction still remains to be done. One firm of commission merchants endeavoured two or three years ago to fill a large order for export. They advertised for "four hundred tons of dressed poultry," but the results were not sufficient to warrant them again undertaking so large a contract. The immediate consequence of the steps taken to meet the demands of the export trade has been to direct the attention of local consumers to the excellence of poultry as an article of diet, with the result that the local demand for first-class table fowls is to-day in excess of the supply.

The exhibition of poultry at the large number of fall tairs, held in various provinces of the Dominion, has had a marked influence upon the improvement of the industry and on the intelligence of the people in regard to it. Nearly every township and county in the Dominion conducts a summer or fall fair, at which an exhibition of pure-bred chickens, ducks, geese, and turkeys forms an attractive feature. Owing to the fact that the greater number of these fairs are held in the summer and early autumn, the birds are not at their best, and do not make the same impressive appearance as those shown at the larger winter exhibitions. The Canadian National Exhibition, held annually at Toronto, distributes in prize-money to poultry exhibitors about 2,500 dols. The Ontario Winter Fair, held at Guelph in each December, has the best poultry show on Canadian soil, and is equal in quality if not in numbers to the best shows on the American Continent. The number of entries averages considerably more than 4,000, and more than 3,000 dols. in cash prizes is paid. The Eastern Ontario Winter Fair, held at Ottawa in the month of January each year, has a poultry show of gradually increasing importance. This winter more than 2,000 entries were received. There are in Canada a large number of poultry clubs organised for the purpose of studying and promoting the interests of the various breeds. Frequently a number of these clubs unite and

hold local exhibitions, or poultry-breeders' shows, that are not without their significance as a means of education and as a contributing cause to the breeders' financial success

In the year 1901, when the last Dominion Census was taken, there were in Canada 544,688 farmers; the number of poultry kept was estimated at 17,922,658 birds, and their value was 5,723,890 dols. The total value of the eggs sold was 10,286,828 dols. The value of the nation's poultry in that year was equal to about one-half that of sheep, to one-third that of swine, to one-fourteenth that of milch-cows, to one-tenth that of other horned cattle, and to one-twenty-third that of horses. In order to appreciate how far each of the provinces of the Dominion participates in poultry production, it may be stated that for 1901 the values given were as follow: British Columbia, poultry 209,747 dols., eggs 426,629 dols.; Manitoba, poultry 417,586 dols., eggs 605,534 dols.; New Brunswick, poultry 213,319 dols., eggs 372,745 dols.; Nova Scotia, poultry 218,223 dols., eggs 543,108 dols.; Ontario, poultry 3,125,166 dols., eggs 5,756,221 dols.; Prince Edward Island, poultry 147,159 dols., eggs 248,423 dols.; Quebec, poultry 1,166,314 dols., eggs 2,007,320 dols.; the North-West Territories (then unorganised), poultry 226,376 dols., eggs 326,848 dols. In the same year the average number of fowls per farm for Canada was 34.24; British Columbia, 43.22; Manitoba, 34.50; New Brunswick, 18.75; Nova Scotia, 14.60; Ontario, 50.93: Prince Edward Island, 43.24; Quebec, 22:49; and the Territories, 22:52. The average number of eggs in dozens produced per farm was as follows: Canada, 159.66; British Columbia, 176.63; Manitoba, 148'66; New Brunswick, 81'03; Nova Scotia, 79.95; Ontario, 241.11; Prince Edward Island, 180.29; Quebec, 105.80; and the Territories, 98.72.

In studying the exports of eggs from 1868 to 1908, the fluctuation is found to be marked. In 1882 there were 10,499,082 dozen eggs, valued at 1,643,709 dols. From that time until 1888 there was a gradual increase up to when the number reached 14,170,859 dozen, valued at 2,122,283 dols. This high average continued for two years; there was then a decline until 1894, when only 5,000,000 dozen were exported. This was followed by a gradual increase until 1902, when 11,600,000 dozen were exported. Since that time the exports have descended until in 1908 there were only 1,365,890 dozen, valued at 310,818 dols., which is lower than any year since 1872. Since 1901 Canada has been importing eggs to a con-These come from China, Japan, siderable extent. the United States, and other countries. In 1908 the imports were as follow: United States, 1,096,766 dozen, valued at 210,708 dols.; Hong Kong, 13,593 dozen, valued at 853 dols.; China, 29,847 dozen, valued at 1,771 dols.; other countries, 9,780 dozen, valued at 1,662 dols.; or a total of 1,149,986 dozen, costing 214,994 dols.

The markets for Canadian eggs are widely distributed. Large numbers go to the British West Indies, British South Africa, Newfoundland, the United States, and to Great Britain. So far as the British market is concerned, it is interesting to note that in 1901 Canada sent us more than 11,000,000 dozen. A still larger number was shipped in 1902, but in 1903 only 7,000,000 dozen were shipped, while from 1904 to 1908 the number dropped from 5,679,000 to 1,272,000 dozen.

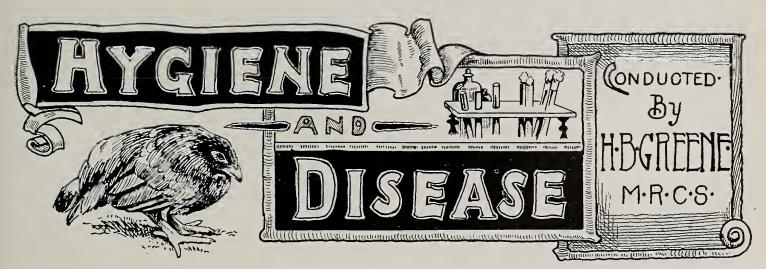
Canada is also importing pure-bred fowls for purposes of improving the breeding stock, chiefly from the United States and Great Britain. For example, in 1908—an average year—99 birds, valued at 663.00 dols., were received from Great Britain, and 3,276 birds, valued at 10,064 dols., were purchased from the United States.

In the years 1905 and 1906 Canada imported large quantities of poultry and game from the United States, amounting in the first year in value to 33,767 dols., and in the second year to 38,679 dols. During 1907 and 1908 this importation was increased not only from the United States, but from Great Britain and from other countries. As to the exports from Canada, in 1902 Great Britain purchased in value dressed and undressed poultry 216,503 dols.; in 1903, 132,099 dols.; in 1904, 107,509 dols.; in 1905, 71,868 dols.; and in the next two years about the same, while in 1908 Great Britain purchased dressed poultry to the value of 99,349 dols. In that year Newfoundland purchased

9,363 dols.; the United States 7,142 dols.; other countries, 480 dols.

On February 15, 1909, the wholesale prices throughout Ontario gave the following averages: Eggs, new-laid (in case lots), 28-29 cents a dozen; storage, 25-26 cents; dressed poultry, chickens, 14-15 cents; fowls, 10-11 cents; turkeys, 18-19 cents a pound.

The outlook for the poultry industry in this country is exceedingly bright; but the need for better organisation, for co-operative methods in handling poultry produce, for properly constructed poultry buildings, improved stock, and more intelligent handling is still as great as it ever has been in the history of the nation's agriculture. It is imperative that some movement be instituted which will concentrate the attention of the people on the possibilities and opportunities offered to those who will undertake poultry-raising with intelligence and zeal. The severe winters that are prevalent throughout Canada are not a serious handicap, but it is improbable that our people enter into specialised poultry-farming on similar lines to the practice so largely in vogue in the United States. Poultry-raising in Canada will probably remain an adjunct to the ordinary business of the farm, but there seems to be no reason why it should not become immensely more profitable and more important as an industry than it is at present.



#### What are the Causes of Stoppage of the Crop?

A prevalent but erroneous impression exists to the effect that obstruction—or, as it is sometimes termed, impaction of the crop—is always due either to some large hard subject blocking its lower outlet, or to that opening having become narrowed by a previous inflammation or injury. It is true that in some instances—and they are very few—it may prove upon post-mortem examination that there has been an interruption of the passage of food by a large pebble, jagged piece of glass, or even a pickle of coarse maize; but in by far the great majority there will be found a crop over-distended

with fermenting food, dry grain or grass, but having an outlet quite patent, innocent of impediment and free from contraction. The fact is that this disaster is by no means an accident of sudden onset; it is rather the last, and because of its serious import therefore the most noticeable, of a 'sequence of happenings, all of which can be obviated. The primary cause of all the trouble is that the crop is filled too fully and rapfdly at a meal. Classified along with the pheasant and grouse among the scratching birds, the domestic fowl, whatever may have been its original wild form, was surely never intended by Nature to bolt its food or gobble grain from a hopper against time. One or two such unnatural

meals may not at first appear to signify. But the muscular fibres of the walls of the crops by repeated stretchings gradually lose their contractility, just as elastic would. The organ becomes slack and baggy; food remains to ferment in its folds and chronic indigestion ensues. It is this loss of muscular tone in the walls, and not any occlusion of the outlet, that allows food to accumulate, instead of being passed on after a delay only sufficiently long to ensure its saturation with the secretions of the crop. To give only moderate quantities of food at a time and to compel fowls to forage for buried grain will, therefore, greatly reduce the risk of impaction.

#### Dandelions.

Even for fowls on grass enclosures variety in vegetable food is beneficial. Vegetables in spring are not, however, at their cheapest, nor always procurable, while roots add to the food bill. The common dandelion plant (taraxacum dens leonis) provides for fowls a green food in abundance at once nutritious, medicinally valuable, and economical, seeing there are few places where it is not to be obtained for the mere labour of gathering. Taraxacum is slightly laxative through its stimulant action on the liver, and abounds in potash, the mineral salt so useful to feathering. For chicks, a few leaves hung up in reach or chopped fine in the soft food will help to keep them in health. Given to fowls, we have always found it assist the laying functions, probably by its action on the liver, preventing congestion and formation of fat. The eagerness with which moulting birds will attack a bunch of dandelions is almost proof, without an analysis, that the assertion of their wealth in potash is correct.

## Ptomaine Poisoning in the Street Laying Competition.

Fourteen deaths among 600 competitors in six months is not a result from the health point of view, of which the promoter of the above competition, Mr. W. Reynolds, has any need to be ashamed. A mortality of 2.3 per cent, for that period, including, as it did, the most trying weather of the year, cannot certainly be considered excessive. Small as it is, however, it might well have been less but for an unlucky enzootic illness that seems to have puzzled the managers, but which can scarcely have been anything else except ptomaine poisoning. This curious outbreak—or, rather, series of outbreaks, for there were three waves of itoccurred between February 5 and 27. In the report of the competition before me the figures relating to it are entered under a column headed "Feb. Attacks," which might read either as "Febrile" or "February" attacks, but is probably meant for the latter. Out of 600 housed in 100 pens, no less than 167 birds, distributed among 53 of the pens, were affected, and although there is no mention in the report of how many of the 14 deaths in the competition were from other causes, it is very probable that most of the mortality was from this illness. A competition so carefully conducted in every

respect could scarcely be permitted to suffer by uncleanliness of food utensils or water. But turning to the list of foodstuffs used, we find among them "Meat and Buffalo greaves" as the only likely materials to have contained decomposing animal substances, unless the item "American meal" included them. It was regrettable that the first fowl to die was not examined with a view to ascertaining the cause of death, instead of being returned to the owner, or that the nature of the illness was not more thoroughly investigated. Had such been done the results, most excellent as they have been, would have been even better. The conclusions to be drawn from this incident of the competition are that, even under the most careful supervision of food and housing, disease may spring upfrom a totally unexpected quarter, and when it does, the importance of its early detection, as bearing on the results of a competition, cannot be over-estimated.

#### Orchards as Rearing Grounds.

Those who are so fortunate as to possess orchards of well-grown fruit trees will do well to remember that at this season of the year no better rearing ground can be imagined in which to place chicken coops or turn out chickens after they have left the foster-mother. The trees afford both shelter from rain and shade from too much sun, while the bursting buds and bloom are continually dislodging myriads of insects that have recently ascended the trunks or emerged from eggs deposited. among the branches in the previous autumn. So small are some of these as to be scarcely perceptible to the human eye. Not so, however, to that of the alert chick, whose keen vision overlooks nothing that is likely to be grist to the digestive mill. But the destruction of insect. pests is not the only benefit conferred by the chicken upon the fruit trees. The scattered deposit of manure left on the surface of the soil is washed in by every shower, and does not fail to contribute materially to the formation of fruit, once more giving proof of the law that Nature is always economical of all her resourcesand careful to lose nothing.

#### Infectious Leuccemia.

An outbreak of Infectious Leucæmia among ducks in Queensland is reported by C. J. Pound in No. 20 of the Agricultural Journal. It was accompanied by a high. mortality of more than 60 per cent., against which no remedial treatment, beyond immediate isolation or the sick and thorough disinfection, seems to have availed. The disease ran a course of from seven to fourteen days, while the incubation period ranged between three and Infectious leucœmia has been observed among fowls by Moore, and a micro-organism (bacterium sanguinarium of Dawson) is claimed as the cause. The character of the blood in lucæmia is pale and watery, showing under the microscope a great increase in the number of the white blood corpuscles as compared to the red. Certain points of similarity in the symptoms of this ailment to those of fowl cholera cause it to be sometimes mistaken for that disease.

## COMMON ERRORS IN THE DIETING OF POULTRY.

BY H. B. GREENE, M.R.C.S.

(Concluded from page 453.)

PASSING on to those foods naturally rich in nitrogenous elements and termed albuminoids, we encounter a varied group of substances differing widely in their external characters but similar in the relation they bear to the general scheme of nutrition. The albumen, fibrin, and syntonin derived from animal flesh, worms, and insects, and the gelatine of gristle and tendon are, as food factors, allied to the casein of milk, the white of eggs, the gluten in oats and oatmeal, and the legumen of peas, beans, lentils, and vetches.

The favourable influence of this group of poultry foods upon growth of frame and bone, and the part they take in promoting egg-formation, have been fully appreciated of late years by utility poultry-keepers. In fact, it seems to be now the vogue to feed with peas, peameal, beanmeal, and green bone much more liberally than is either prudent or profitable. It is true that to do so for a while certainly forces the production of eggs. So far the nitrogen taken is not in excess of the output of energy required.

But a time comes, and generally it is that period when eggs begin to lessen in number, that the import exceeds the export, and then the mischief begins. In contrast to the effects noticeable after abuse of the carbonaceous foods, such as fatness, weight, and diarrhea, there are few distinctive outward signs to give warning of impending disaster from an excessive albuminoid ratio in the diet, except some slight degree of indigestion and loss of appetite. The birds will look bright, their combs and wattles a brilliant red, their excrement apparently normal. Then a couple or more of them may some morning be found dead under the perch, or if deaths are witnessed in the daytime they will be observed to be sudden, and preceded by a staggering gait or a convulsive seizure. We have had opportunities of examining many poultry that have so died, and have invariably found the disease to be located in the kidneys, the appearances of those organs resembling those met with in the human forms of acute and chronic Bright's disease. Death, moreover, is due to uræmic poisoning consequent upon the destruction of the kidney tissues, and not, as we have more than once seen it incorrectly stated, from over-stimulation of the ovary. That organ is solely one of reproduction, and of no great consequence to vitality, seeing that a hen will get along as well without as with it.

Whenever there has been a sudden over-indulgence in meat, beans, peas, or their milled products, the kidneys become acutely and rapidly engorged. Many birds die simultaneously, and generally within an hour or two of the fatal feast. On the other hand, when the excess is represented only by a daily diet too nitrogenous in its proportions, the disease takes the more chronic form and the deaths occur at longer and more irregular intervals. The victims, moreover, become anæmic, dropsical, or even comatose, before they succumb.

At the second National Poultry Conference held in Reading in 1907, a most instructive paper was contributed by Mr. George A. Palmer, entitled "Experiences in Feeding Poultry,"\* in which he related how a Lincolnshire farmer was unable to account satisfactorily for the sudden and numerous losses taking place among his poultry. The mystery was solved by "a visit to the stackyard that revealed two peastacks, one of vetches, and three of beans," upon which the birds had been gorging, picking out all they could reach. After the supply became exhausted "the mortality gradually ceased." We have often met with like fatalities among poultry that have had the free run of vetch, bean, or pea fields, while it is certain that an indiscriminate dose of peameal in the soft mash is the cause of much chronic disease of the kidneys. Touching upon the food value of peameal, Mr. Palmer, in the paper mentioned above, is of opinion that, while not objecting to its occasional use in place of meat, it should be employed "with strict moderation." We are entirely in agreement with his

The whole question of the safest and, in the long run, most profitable ratio for the laying hen, or, perhaps, we should say, for the different types of laying hen, awaits the attention of the utility poultry-keeper, which for the moment seems fixed on the fascinating kaleidoscope of Mendelism. For more than one reason it is difficult to understand how selection upon Mendelian lines is expected to influence inheritance of fecundity, nor do we anticipate that much will come from experiment in that particular direction. Still, there are many who are taking infinite pains to build up a laying strain with the help of Mendel and plenty of nitrogen. Which is the more potent factor of the two it is at present impossible to say, but those who believe in the combination will do well to take into account the fact that to load up the system of a pullet with food elements in amount utterly beyond its powers of assimilation, in the hope that it will breed descendants through whom the eggs will rattle with the speed of the films of a cinematograph, is to forsake the substance for the shadow.

The term "house scraps" is familiar to our readers, and in many households a vessel is set apart in which are collected waste pieces of meat, fish, and vegetable oddments. Every care should be taken to keep this receptacle scrupulously clean, nor should any animal or vegetable scraps that have gone bad on any account be mixed with the food. Fowls are as susceptible as human beings to ptomaine poisoning, set up by the ingestion of the products of the bacteria present in decomposing flesh and fish. Quite recently one of our readers lost six fine birds from giving them some fish that had become high, and among many curious substances that we know to have poisoned fowls may be

<sup>\*</sup> Second National Poultry Conference, Reading, Official Report.

mentioned shrimps, almond icing, a bottle of pickles, and canned milk. Doubtless these things had, after being condemned as unfit for human food, been relegated to the fowls' stockpot, under the mistaken impression that anything was good enough for the poultry!

Another injurious qualitative change occurring in certain foodstuffs is that which takes place in bran, and sometimes meals, when long stored or exposed to damp. The formation of moulds and fermenting fungi are apt to set up gastric and intestinal irritation, especially in ducklings and chickens.

The large quantity of husk that is included in bran is another source of danger, but in this particular it is no worse than, if as bad as, oats and barley. Still, we have known a dietary exclusively made up of the three to be followed by the formation of a husk-ball in the gizzard. The softened kernels of grain had percolated through, leaving each husk behind to help to swell the fibrous accumulation in the gizzard. When nothing more could enter or pass through, death had resulted from slow starvation.

Again, an "all grain" diet is one cause of relaxed and obstructed crop, to which chicks also are subject when kept entirely on grain. It is a disadvantage attached to the "dry feed" system.

The mineral salts of potash, sodium, sulphur, phosphorus, and lime are essential to the well-being of poultry. They are found in fairly correct proportions in water and nearly every form of organic food, so that the responsibility of their supply does not devolve upon the poultry-keeper. It should be unnecessary to do more than mention that there are many water-borne diseases of poultry to be avoided by a pure supply. But even a pure water can be too hard and rich in lime for chicks, causing constipation and bowel obstruction. Whenever possible, fowls should be prevented from having access to manure water, but if this is not practicable, plenty of clean water placed about in troughs will at least obviate the necessity of their resorting to that which is polluted.

#### REVIEW.

POULTRY. By "Chanticleer." Greening and Co. Price 6d. net.

THERE is still a very large demand among amateur poultry-keepers for the cheaper kind of handbook, containing such information as to the management of fowls as will enable the beginner to avoid elementary mistakes. Unfortunately a good many of these so-called cheap guides to poultry-keeping are dear at the price, being compiled by writers with a scant knowledge of their subject, and thrust upon the market merely in obedience to the modern craze for book-making; but every now and again a useful specimen is produced, and such is that entitled "Poultry," by "Chanticleer," in Messrs. Greening's Useful Handbook Series. Hints for the small poultry-keeper—for whom this little volume is primarily intended—will be found in

the diagrams provided therein. On page 22, for instance, there is a plan for a house, scratching-shed, and run in a small space, so devised that the ground, limited as it is, need never become tainted; and among the many devices for obviating the latter danger to health there are few that equal the simplicity of this one. A feeding-box for soft food, which feeds twelve fowls without allowing them to interfere with each other during the meal, is another ingenious contrivance. The text contains information and suggestions on the respective qualities of pure breeds and cross-breeds, on housing and feeding, natural and artificial incubation, fattening fowls for table, egg-production, and ailments and their remedies.

#### LADY MARY DE MAUNY'S FARM.

A FARM has lately been started at Sandel Heath, near Salisbury, by Lady Mary de Mauny-Talvande. It has been laid out upon unique model lines, and contains features not hitherto embraced. The object in view is to provide instruction in poultry culture, especially as regards exhibition, although utility points are also kept in view. Various methods of poultry work are followed namely, those in vogue in England, France, and America. There is a gardening department, in which every branch is taught, special attention being devoted to French intensive market gardening, fruit culture and flowers according to the most up-to-date methods and under the direction of French gardeners. Landscape gardening is also carried out, together with the planning and arranging of French parterres and all kinds of ornamental work. The poultry department is under the management of Mr. Maurice Richardson, who holds certificates from Reading College and the Ecole d'Aviculture de Gambais, France, and until lately was manager of the Royal Naval College Poultry Farm at Osborne, I.W.

#### An Interesting Problem.

From the window of a restaurant off the Strand:

Chickens cooked or uncooked.

How do you uncook a chicken?—Punch.

#### Was It Suicide?

An idyll of bird life is reported from Port Sunlight, where for several years a gorgeous peacock and his mate have been the pride of the villagers. Early one morning the hen bird strayed on to the railway, and was cut to pieces by a train. Her disconsolate mate wandered through the village crying piteously, and something more than coincidence is attributed to the fact that next day his dead and mutilated body was found on the railway near the spot where the other tragedy had occurred. The devotion of the birds to one another is held by a section of the villagers to justify a verdict of suicide through grief in the case of the second victim of this tragedy.—Feathered Life.



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IT is about a year since Mr. Arthur C. Gilbert took up his residence in the pretty modern house that was built for him on the Swanley Poultry Farm at Wilmington, Kent. poultry plant, however, has been established here for a considerably longer time, Mr. Gilbert having acquired and stocked his holding while he was still living some little distance away. Thus, though the house itself is comparatively new the undertaking is not; nor is it necessary to inform those cognisant with the affairs of the poultry world that Mr. Gilbert's reputation as a fancier did not begin only with the undertaking. His association with the Fancy is that of a lifetime, and his success as a breeder of Orpingtons, particularly of Blacks, may be traced back over a number of years. In regard to Black Orpingtons, indeed, he is one of the very few—perhaps of the two or three—who from the date of their first victories at big shows have remained consistently at or very near the top.

The intention, however, of this article is not to give an account of Mr. Gilbert's achievements in the show-pen, for these have been

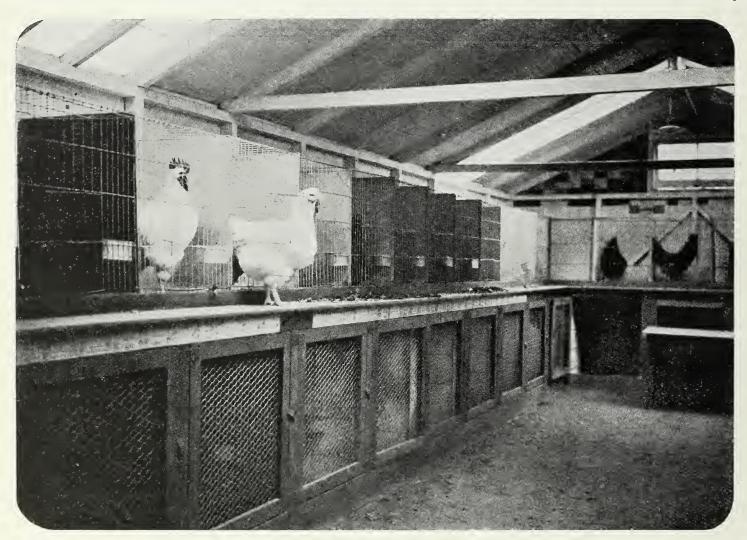
recorded elsewhere, often and in detail. Our purpose is rather to convey our personal impression of Mr. Gilbert himself, and to render, as concisely as possible, some description of his farm and of the methods he adopts. A man's personality and the way in which he does his business and gains his triumphs are not inevitably reconcilable; but in many cases the two things are so closely connected that the methods appear as the reflection of the man, and the man as that of his methods. Mr. Gilbert is one of these latter cases. The sympathy between his establishment and himself is definite and well marked.

A broad-shouldered figure of medium height, hardly yet arrived at his prime, Mr. Gilbert shows every evidence of having lived the open-air life, After five minutes' conversation with him one would find out that he is not a faddist; in half an hour one would observe that the absence of faddism is due not to obstinacy, innate conservatism, or any of the other failings that the too much up-to-date poultry-keeper is fond of attributing to those who do not agree with him, but to

#### TRADE SUPPLEMENT

the sound, solid experience of what is best suited to his particular requirements. In the tritest phrase, Mr. Gilbert knows what he wants, and knows as well as any poultry fancier how to get it. One may agree with his methods or not; the chances are that when one has talked to him for a little while and has obtained an inkling of his grasp of the essentials of poultry-breeding, one will cease to attach much importance to the minor details, modernisms, that he contrives to do without, or, at any rate, attends to in his individual way. But, whether one agrees with him or disagrees, one is obliged to

good taste. The house, approached by a carriage drive, from the entrance to which the accompanying photograph was taken, stands a little way back from the road, and overlooks the greater part of the poultry plant. This consists in all of about sixteen acres. The foreground, as one might say, is an expanse of meadow land, with some few trees, sloping gently towards the main block of pens, and bounded on the left by a range of large duck runs. Beyond the pens lies a background of wood, and this extends in a semi-circle to the right, the ground gradually rising until just beyond a distant group



THE EXHIBITION SHED.

[Copyright.

respect his opinions and theories on every breeding topic, while respect for his management follows as a matter of course.

To come to the root of the question, the keynote to the arrangements at the Swanley Poultry Farm is their simplicity. One finds this quality in every part of the establishment, from the dwelling-house to the furthest range of pens. While it would be impertinent, if not irrelevant, to go into details of Mr. Gilbert's domestic arrangements, we may venture to remark that the simplicity here is synonymous with a quiet,

of farm buildings, including the exhibition house, it culminates in a steep tree-grown hill. This belt of woodland plays an important part in the economy of the farm. It shades the furthermost line of houses; it shelters the plot of high ground behind the exhibition house, where a little group of rearing coops are disposed in beds growing vegetable products; it is utilised again tor the protection of two capacious outlying runs, climbing up the hillside, which are of such a size and character that they can, if required, be converted into rearing grounds for chicks, the shade

TRADE SUPPLEMENT

and the abundance of undergrowth providing ample shelter; and it is a fine natural exercise ground for birds at liberty.

If one scrambles up to the highest point one can look down on Mr. Gilbert's boundary, not many yards on the other side. One can also survey the whole farm and—at any rate, when the leaves are off the trees—a vast amount of the surrounding country, seeing that this is one of the highest points in Kent. And the hill itself, or hillock, or kopje—call it what you will—is a pleasant enough place in the early spring, with its carpet of dead gold leaves and silver stems

shed, and about seventy cockerel houses comprise the main plant. This, however, does not include the outlying runs on the hillside, to which reference has already been made. One of our photographs represents the line of cockerel houses extending towards the exhibition house, each having a run attached; these, by the way, were at the time of our visit being utilised as small breeding-pens. The exhibition house is divided into two compartments, the smaller being used as a washing - room. A large grate supplies the necessary warmth for this operation, and the room is fitted with half a dozen cages to receive



GENERAL VIEW OF FARM.

[Copyright.

of birch trees, and sense of altitude and silence; when birch and weeping chestnut are clothed with green foliage it must be more pleasant still. The houses and runs are, as we have indicated, on sloping ground, a fact which is in itself favourable to good drainage. Add to this the nature of the soil, which is light loam on the top of sand and chalk, and you have a set of conditions perfect for the health and prosperity of a poultry plant.

Twenty-four large breeding-pens, each containing a combined roosting-house and scratching-

the birds prior to their removal into the cooler atmosphere of the adjoining room.

The houses throughout are solidly constructed, the internal arrangement being of the simplest character compatible with cleanliness and comfort. Thus the floors consist of sandy earth from the hillside, dumped down hard in the roosting division, so that droppings can be removed as easily as from concrete, while in the scratching-shed it is raked up so as to form a litter. Both walls and roof are creesoted—or perhaps it might be more correct to say coated

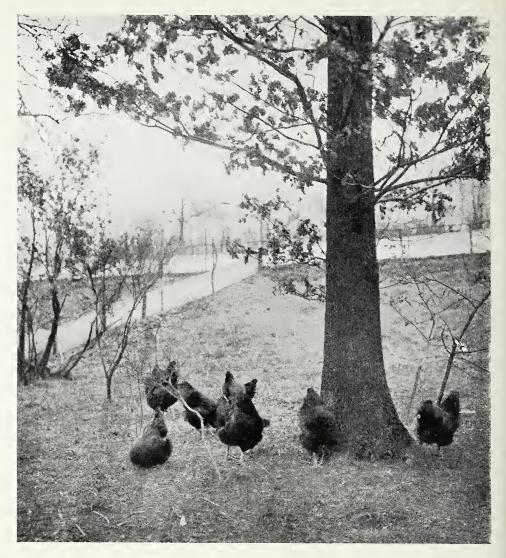
#### TRADE SUPPLEMENT

with creosote, since Mr. Gilbert uses this substance as if it were paint or varnish, and finds it

answers the purpose.

Discussion of the feathered stock is outside of the province of this article. It may, however, be mentioned that the Orpingtons, Black and Spangled, and the White Wyandottes made a particularly brave show, while a flock of Buff Orpington chickens with one or two Jubilees among them, hatched in January, displayed a robustness that left no fear as to their future. There were, too, Blue Langshans down by the wood, Bantains in the cockerel - house pens, genuine Cuckoo Orpingtons and experi-mental "blue" ones, to mention a few of the breeds conspicuous among a greatly varied stock. And so we pass from what Mr. Gilbert has to what he has not. He has not a single brooder on the place. There are no trapnests, no nest-boxes of any kind. There is an incubator room, containing two machines, but they are more for the benefit of Mr. Gilbert's pupils than for his own. If a broody hen can be procured from his own farm or elsewhere, for love or money, the incubator is disregarded.

Thus from one of the ablest and most successful breeders of fancy stock we have the reiteration of the principle that Nature is better than all human invention or intervention, and, so far



A PEN OF BLACK ORPINGTONS ON THE HILLSIDE.

as he is concerned, the rightness and fitness of his contention are manifest. To a breeder who knows his business as Mr. Gilbert does, whose faculties have been trained to such a keen point

of observation that he knows every hen and pullet on his place and can identify every egg, a brooder is an intrusion and a trap-nest a superfluous luxury. That there are other breeders who, whatever their talents, cannot afford to dispense with these appliances is neither here nor there, and if from one point of view Mr. Gilbert is a reactionary, from another he is the type of the born poultry fancier to whom we must look for true progress in the unknown future, the type that can maintain a clear vision of essentials, independence without bigotry, and business ability without greed of gain.



REL PENS. [Copyright.

RANGE OF COCKEREL PENS.



#### English Poultry Trade.

During the early part of the month the trade in poultry was inclined to be dull owing to the Lenten fasts, but after Easter the demand was considerably brisker. Young tender chickens have been very scarce, and consequently have realised good prices. Although trade has been on the dull side, so short has English poultry been that very little was to be seen on the markets after ten o'clock in the morning. The demand for Petits Poussins and Poulet Graines has been very good, the prices realised being from 1s. 6d. to 1s. 9d. for the former and from 2s. 3d. to 2s. 9d. for the latter. This is a trade which would well repay English producers to cater for. Capons also have met with a fair demand at from 4s. 6d. to 6s. 6d. each. The few ducklings that have come to hand have fetched from 6s. to 7s. each. These birds were not up to the highest standard of quality, being rather on the small side. This trade will be very brisk indeed as soon as supplies are available.

#### Imports of Foreign Eggs.

The imports of foreign eggs for the three months ended March 31 show a falling - off in quantities amounting to upwards of 102,000,000 eggs, as compared with the corresponding period of 1908. effect of this shortage has been to raise the values of foreign supplies very considerably, the most remarkable advance being that recorded for eggs received through Germany, amounting to 1s. 7/2d. per 120, or nearly twopence per dozen. As will be seen from the figures given on this page, the average value for foreign eggs has advanced by 1s. ½d. per 120. It has to be seen whether this advance in values will be maintained. Already there are signs of weakening, which seem to indicate increasing supplies. There is, however, considerable evidence that foreign supplies will become dearer as time goes on, for consumption abroad is increasing more rapidly than production. Italy this spring, in spite of reducing her exports of eggs to this country by one-third as compared with the spring of 1908, was obliged to import from Austria-Hungary to meet her home demand. Germany also is increasing her consumption of eggs and poultry, as is the case in all countries where manufactures and industrial areas are on the increase.

IMPORT VALUES OF EGGS.
Three months ending March 31.

111100 11101111				
	19	o8.	-19	<b>0</b> 9.
	s.	d.	s.	d.
Russia	7	9		
Denmark	9	4	 10	$5\frac{1}{4}$
Germany	7	6	 9	$I\frac{1}{2}$
France	9	$I^{\frac{1}{2}}$	 9	$IO_{3}^{1}$
Italy	8	$II\frac{1}{2}$	 9	$8\frac{1}{2}$
Austria-Hungary	7	9	 9	О
Canada	8	$9\frac{3}{4}$		
Other Countries	6	$10\frac{1}{2}$	 8	$\frac{1}{4}$
Totals	8s.	$2\frac{1}{2}d.$	 9s.	2¾d.

#### Co-operation in Germany.

Much has been done by means of co-operation to promote agriculture in Germany, and in this poultrybreeding shares. An interesting type of association has been introduced into Saxony and Bavaria for the cooperative sale of fowls and eggs, together with the supply of pure-bred fowls to members. The essential feature, however, of these societies is that the members strictly confine themselves to one breed of fowl in the hope that by the uniformity thus obtained greater facilities for sale will be secured, as well as a general improvement in other ways. Uniform rules for breeding, feeding, and management are laid down, and the cooperative purchase of feeding stuffs, implements, &c., is undertaken. It is thought that societies of this kind are best calculated to promote the fattening of fowls, which has not been practised to any great extent in the German Co-operative egg societies enter into the Empire. scheme. It will be seen, therefore, that the foundation has been laid for the building up of the poultry industry on right lines, and we compliment our German confrères on the excellent opportunities available to them.

#### Foreign Poultry.

The imports of dead poultry again show an increase in value as compared with last season. They have now for the past three years shown a steady upward tendency, due partly to improvement in quality and the increasing demand in this country, partly as to the insufficiency in the supplies of home produce, cheapness also being a powerful factor. It is during the first six months of the year that foreign poultry meets the best demand. At the time of writing large quantities are being disposed of on the markets, realising fair values.

#### Foreign Game.

The imports of game, unlike those of poultry, have shown a falling-off of 50 per cent. in values during the past three years. The demand this season has been slacker than ever.

IMPORT VALUES	of Poul'	$\Gamma RY$ .	
Three months end	ling Mar	ch 31.	
	1908.		1909.
	£		£
Russia			258,962
France	0		21,667
			34,532
United States of America			61,549
Other Countries	36,293	• • • • •	34,093
Totals	5,381,619	#	410,803

Import Values	OF GAM	E.	
Three months endi	ng Marc	h 31.	
	1908.		1909.
	£		£
Russia			19,505
France	33		71
Austria-Hungary	5,322		2,048
United States of America	877		
Other Countries	20,122		11,383
	-		
Totals	£42,115		£33,007

#### The British Egg and Poultry Trade.

The following memorandum by the Secretary of the National Poultry Organisation Society has been issued by the Agricultural Organisation Society:

The last few years have seen a rapid and profitable growth of poultry-keeping in this country, with substantial increase of prices obtained by producers, as a result of enormously enhanced consumption. It is satisfactory to note that there has been a steady advance in quality of English eggs and chickens, due to the adoption of methods in conformity with modern conditions and competition, with the result that the better qualities of home produce occupy a position on our markets which foreign supplies cannot reach. Prices are obtainable in excess of what have been known previously. Unfortunately a considerable proportion of native eggs and poultry, owing to bad methods of production and marketing, fail to reach the desired standards, and thus are brought into competition with inferior grades of foreign goods, which in some cases sell at higher rates by reason of the better way in which they are graded and packed, and the greater regularity of supplies.

So far as the future is concerned, the signs on all sides are that the maximum of foreign supplies has been reached, and with a rapidly increasing demand an opportunity is afforded for home producers to regain the greater part of this trade. With the falling imports from abroad and the sharp rise in values, it is essential that home production should be correspondingly advanced, otherwise consumption will be checked, due to prices attaining a point beyond the purchasing

power of the great bulk of our people.

There are some striking facts in this connection which it is desirable should be brought before producers and Agricultural Co-operative Societies, as recorded in the Annual Summary of the Poultry Industry of 1908, recently issued by the secretary of the National Poultry Organisation Society, which should encourage greatly increased production in this country.

The imports of eggs from the Colonies and foreign countries attained in 1906 a total of 18,874,059 great hundreds, falling in 1907 to 18,567,901 great hundreds, and in 1908 a further reduction took place to 18,210,070 great hundreds, or a decline in two years of nearly eighty millions of eggs imported. The declared values were as follow: 1906, £7,098,122; 1907, £7,185,530; 1908, £7,183,112. Thus from 1906 to 1908 the value had increased by £84,980 for 80,000,000 fewer eggs. This tendency has marked several years, as indicated by the fact that in six years the declared values of Colonial and foreign eggs have increased by 2s. 01d.

So far as the present year is concerned, the same is seen, but to a greater extent—namely, reduction of supplies and enhancement of prices. For the two months ending February 28, 1909, the reduction of eggs imported as compared with the same period of 1908 was 769,757 great hundreds (92,370,840 eggs), or nearly As a consequence the declared values in 30 per cent. the two months named were 1s. 2d. per 120 greater than in the corresponding months of 1908. This may be abnormal, but is suggestive, showing that the foreign stocks were exhausted earlier than is usually the case, due to widespread demand. Reduction of supplies is recorded from every Continental country.

In connection with the egg trade are facts which deserve careful attention. A few years ago efforts were put forth in Canada to ship eggs to Britain, and for the time it appeared that these would quickly increase. The trade grew rapidly. But so great has been the advance of consumption in that colony that shipments have practically ceased, and the total value of supplies in 1908 was only £24,000, less than one-fourth those sent to us in 1906. The same result is observable in Australia, where production has increased rapidly of late. Owing to improved methods of production and marketing, quality has advanced, Colonial prices have gone up, consumption has been stimulated, and export to England has almost ceased. For some time to come, therefore, it is improbable that supplies of any volume will be received from British Colonies. These could never compete with the better qualities of home produce, but their absence means a greater opportunity for our own producers.

With regard to table poultry the same influences are at work. Some time ago Canadians took up this business, and sent large quantities of chickens and geese and turkeys to our markets. But again improved quality created a greater demand in that colony, and it is now found more profitable to sell there than to ship for British consumption. The same is met with in the United States. Great fattening stations were established in the Middle West, specially in view of the English trade. In 1906 the imports of poultry from the United States were in value £243,750, or 28 per cent. of the total poultry supplies received from abroad. But again improved quality has stimulated local demand, and in 1908 imports had fallen to £152,544, or a little more than 16 per cent. of the entire imports. The signs are that ultimately this source of supply will be unreliable and of very minor importance.

The facts here stated, taken from official returns, together with the increasing demand for home produce and the enhanced prices available, reveal an opportunity for home producers never known at any previous period. Traders of all kinds are clamouring for native supplies, and inquiries are being received from merchants who heretofore have dealt only in foreign produce.

It is urged, therefore, that in each district efforts should be put forth by farmers of every grade and others to take advantage of a large and profitable demand, and that within the producing areas, by means of existing Agricultural Co-operative Societies or new societies established for the purpose, the trade shall be organised and a lucrative branch of agriculture retained for home producers.

## THE ILLUSTRATED POULTRY RECORD

# £50 Prize Competition £50

#### A A A A

### OPEN TO THE WORLD.

#### PRIZES OFFERED.

In order to encourage the Poultry Industry, and at the same time to make widely known THE ILLUSTRATED POULTRY RECORD by extending its readership, the Proprietors offer one of the following Prizes:

- 1.—A Six Months' Scholarship at the College Poultry Farm, Theale, including all Tuition Fees and Board and Residence, or training at any recognised Institute in any part of the World. Value £50.
- 2.—A Tour to the leading Poultry Centres of Europe or America. Value £50. Or
- 3.—Poultry Stock or Appliances to the Value of \$50.

## HOW TO WIN THE PRIZE.

The Person who, during the twelve months ending September 30, 1909, secures the largest number of Annual Subscribers to The Illustrated Poultry Record will, subject to the regulations, be awarded one of the above Prizes, of the value of £50, as he or she may select.

N.B.—Each Competitor who secures 10 or more Annual Subscribers will receive a copy of "The Illustrated Poultry Record" for one year Free of Charge.

#### REGULATIONS.

I. The name of the Competitor is to be sent to the office for Registration.

2. The Competitor must forward the names of Subscribers obtained to the office as received. The Subscription will commence with the next issue.

3. With each Subscriber's name, 6s. must be enclosed when the paper is to be delivered through a Newsagent, or 8s. when the paper is to be forwarded by post. All Colonial and Foreign orders must be accompanied by 8s. (except Canada, in which case 7s. is the amount), as arrangements cannot be made for delivery abroad by Newsagents.

4. If the Subscriber prefers to pay his Newsagent the Annual Subscription, the Newsagent's receipt for payment of a yearly order will be accepted.

5. If two or more persons secure the same number of Annual Subscribers—which is very unlikely—the Editor reserves the right of extending the period of Competition for one month.

6. If the successful Competitor wishes to do so, he or she may nominate another person for the Prize, subject to the approval of the Editor.

7. Before the award is announced, the Competitors' Lists will be checked by Messrs. SMITH & LONGCROFT, Chartered Accountants, 41, Bishopsgate-street Within, London, E.C.

8. Should the winner live outside the United Kingdom, and elect to take No. 1, he or she would pay travelling expenses to England, or take a shorter course, subject to the approval of the Editor.

9. The latest date for receiving Subscriptions will be as follows:

United Kingdom...... Sept. 30 The Continent, Canada, and U.S.A... Oct. 10

The Colonies, &c..... Oct. 20

and the result will be announced in the November issue.

10. The Editor, Sectional Editors, and members of the Office Staff and Newsagents are prohibited from competing.

11. The Editor's decision must in all cases be accepted as final, and all Competitors must enter on this understanding.

, COLONIAL, AND FOREIGN POULTRY, DURING APRIL.	FOREIGN POULTRY—LONDON MARKETS.	PRICES REALISED DURING THE MONTH.	Chickens. Bach. Each. Each. Fer lb. Per lb. Per lb.	1/6 to 2/9	GAME. Price Each IMPORTS OF POULTRY AND GAME. Month. Month.	2/6 to 2/9 COUNTRIES OF ORIGIN DECLARED VALUES.	". 1/4 Russia Garage # £13	Hearing 1/2 1/6 France	Totals $\mathfrak{L}_{19,404}$ $\mathfrak{L}_{103,241}$		k. 2nd Week. 3rd Week. Per 120. Per 120. Per 120.		ın Gt. Hund.	k. 2nd Week. 3rd Week. 4th Week. Russia 10.820 17.001	Per 120. Per 120. Denmark 299,079	8/9 to 9/6 8/0 to 9/0 8/3 to 8/9 Italy 151.520	8/6 9/0 7/6 8/0 7/3 8/0 Canada		Totals 1,175,675 £501,195
TABLE OF PRICES REALISED FOR HOME, GAME, AND EGGS	ENGLISH POULTRY—LONDON MARKETS.	Description 1st Week. 2nd Week. 3rd Week. 4th Week.	Chickens $3/6$ to $5/6$ $3/6$ to $5/6$ $3/9$ to $5/6$ $3/9$ to	ire 3/6 5/6 3/6 5/6 3/9 3/3 +/6 3/3 +/6 3/6 3/3 +/6 3/6 +/6 3/6 hickens 1/6 6/6 +/6 6/6 +/6 ary Ducklings. 2/9 2/9 2/3 3/9 2/9 3/6 +/9 4/0 6/0 +/6 ary Ducklings.	" 1/6 1/4 " 1/6 1/6 " 1/8 1/6 " 1/9 FOREIGN " 2/9 2/6 " 2/9 2/6 " 2/9 LONDON MA	ENGLISH GAME—LONDON MARKETS. Capercalizie	DESCRIPTION. Each. Each. Each. Partridges.	Grouse         — to — — to — — to — — to — Bordeaux Pigeons           Partridges         — — — Hares           Pheasants         — — — Rabbits		Kabbits, Lame	aine 2/6 3/0 2/6 3/0 2/0 2/6 2/3	.ock	Plover F	ENGLISH EGGS.		0/6 ···	nces. Eggs per 1/- Eggs per 1/- Eggs per 1/- Eggs per 1/- Austrian 7/9	MANCHESTER          0/104 doz         0/10 doz         0/10 doz         13 to 14         Russian            BRISTOL          0/104 doz         0/10 doz	

## ANSWERS TO CORRESPONDENTS.

The Editor will be glad to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in any difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

#### Lameness in Chickens.

"Can you tell me the cause of young chickens going lame when about a fortnight old? I keep them in a brooder heated to about 90deg., and feed them on biscuit-meal and house scraps. None have died, but about 25 per cent. of them are quite lame."—M. S. R. (Crawley.)

The leg-weakness is being caused either by excessive brooder heat or by a hard, hot floor. Bring down the temperature gradually about 8deg, each day until it is not higher than 70deg,, and if the brooder is in a room or under glass move it out into the open air on grass. Cover floor of inner chamber with three or four inches of peat moss, and see that it is sufficiently ventilated and not overcrowded.—(H. B. G.)

#### Infertile Eggs.

"Will you please tell me how to distinguish fertile from infertile eggs? When should they be tested?"—M. G. (Enfield.)

The test should be made in a darkened room by candle-light, after the eggs have been incubated for six days. When looking at the flame of the candle through the egg, if the egg is perfectly clear you may take it to be infertile; while if the egg is fertile a spider-like spot will be observed, with several fine radiations therefrom. A mistake cannot easily be made on the seventh day, and for this reason we find the seventh day the most convenient time for testing.

#### Bent Breastbones.

"Nearly all my chickens are coming with crooked breastbones, and the poulterer to whom I send my birds says he cannot allow me a good price for them. I shall be very grateful if you will please tell me what makes the breastbones bent, and how should I overcome it."—H. W. M. (Chesterfield.)

One cause of bent breastbones is that the chickens perch when too young. They ought not to roost until between three and four months old. If, however, a perch is necessary before then, in order that the chickens may be removed above the reach of vermin, an eightinch shelf should be employed. In this manner the cartilege of the breast will not be damaged. Stock birds with this defect should not be bred from, as undoubtedly they transmit this weakness to the progeny.

#### Stock Turkeys.

"How many turkey hens should be mated to one stag? All my eggs are coming infertile this season, although I have never had any before. Your help will be greatly appreciated."—W. W. F. (York.)

Eight hens are sufficient for one male bird, and it is to be noted that, unlike other poultry, one service fertilises all a hen's eggs for that season, so the male need not of necessity be continually in attendance. The reason for all your eggs coming infertile may be that you are using immature stock. Were you to give us more particulars, doubtless we should be able to assist you.

#### Do Poultry Pay?

"I am a baker by trade, but have always been accustomed to live in the country and keep a few fowls. I have saved up £300, and am thinking of giving up baking and starting a small poultry-farm. What is your advice? Could I make a living from it? I live near a large town, where there is always a ready sale for new-laid eggs and young chickens. I am very active and hardworking."—W. C. (Woodbridge.)

Our advice to you is stick to your trade. If you have saved £300 by it, it should not be too readily given up. Having lived in the country and kept a few fowls is not experience enough to make you launch out into poultry-farming on a sufficiently large scale for you to make a living by it. If, however, you first learn the business—and it does thoroughly require learning—then link your poultry-farming with some kindred branch, and use your £300 as a start. There is no reason why ultimately you should not make a living by it.

#### Rearing Ducklings.

"I am expecting some ducklings out about May 5. Would you kindly tell me what I should feed them on, and when they should be allowed into the water? I I have a good pond, about half an acre big. Any help you can give me will be much appreciated."—H. A. S. (Cork.)

You do not state whether it is intended to rear the ducklings for the table or for stock purposes? If the former, the food supplied from the time of hatching until the ducklings reach the age of five weeks should be finely-ground oats and milk. If difficulty be experienced in obtaining ground oats, barley-meal and middlings will be found an excellent substitute. It will materially assist their growth if a proportion of meat be supplied—say, ½oz. per bird per day. It must be fresh and well cooked. Mix all together, meat, liquor in which it was cooked, with barley-meal and sharps. The final three or four weeks boiled rice and skim milk may be used. As much green food should be given as the birds will eat. From the time of hatching till the ducklings are three weeks old four feeds a day should be given; after this, and until they reach killing age, three feeds a day will be sufficient. Water for drinking should only be supplied in small quantities. The trough in which the water is given should be filled up nearly to the top with coarse gravel. Ducklings intended for early killing should not be allowed to swim, as this greatly retards fattening. If the ducklings are to be reared to breeding age a different method of feeding must be adopted. Grain, preferably oats, should be their staple food from as early a time as possible, and access to swimming water is absolutely necessary for the strength and stamina of the future ducks.

#### Temperature for Incubator.

"What is the best temperature at which to work an incubator? I have been running mine at 106deg., but I have had very poor results."—S. W. E. (Chester.)

The reason for your poor results is at once apparent. The temperature at which you run your machine is much

too high, the best results being obtained when the temperature is kept at from 102½ deg. to 104deg. The heat of the room in which the incubator stands is also of importance, especially if the machine is of the hot-air type, which is more easily influenced by its surroundings than a tank machine. As nearly as possible the temperature of the room should be maintained from 55deg. to 65deg. Fahr.

#### Feeding Turkey Chickens.

"I shall be obliged if you will kindly tell me what are the best foods for turkeys from a day to three months old."—M. R. (Finchley.)

Turkey chickens do not require feeding until they are twenty-four to thirty hours old. The food for the first five or six days should consist of hard-boiled eggs, chopped fine, mixed with biscuit-meal or stale bread-crumbs, and slightly moistened with milk. The egg food should be left off gradually, giving in its place a cooked food mixed with rice, boiled in milk. When ten days or a fortnight old a little dari, groats, or buck-wheat should be thrown down, and, most important of all, young onions, finely chopped. All kinds of tender green food are useful, but meat, minced and mixed with their soft food for the first three months of the turkey's life, is

absolutely imperative. With this one exception the same foods as used for the other poultry may be given to the young turkeys.

#### Short Replies.

- S. R. (Purley): The price varies from month to month. About 18s. is a fair average.
- F. S. R. M. (Glasgow): We know of no firm of that name.
- E. R. T. (Limerick): White Leghorns would answer your purpose better than the variety named.
- R. G. (London): The first half of November.
- P. R. T. (Guelp, Canada): About May 25 to June 25.
- L. B. (Carlisle): Yes.
- G. S. H. (Burnley): You had better write to the Secretary, National Poultry Organisation Society, 12, Hanover-square, London, W. We cannot give you the information you require.
- B. T. (Preston): There is no better mixture than the following: 1oz. lard, 1oz. mercurial ointment, ½oz. of powdered sulphur, and sufficient paraffin oil to make semi-lequid.
- L. G. (Maud, Aberdeenshire): 75 per cent. is excellent. About 60 per cent. to 65 per cent.
- A. B. (Queenstown): We have not the least idea.

## NOTES FROM CORRESPONDENTS.

#### SCOTTISH NOTES.

By GEORGE COOPER.

POULTRY-KEEPING in the North of Scotland, whether utility or fancy, has made vast strides within the past two or three years. Especially is this the case among agriculturists. Apathy and indifference towards the possibilities of poultry husbandry for profit have given way to a widespread interest in its pursuit.

The agencies which have been at work to bring about this welcome result are many and varied. Prominent among them are the labours of a daily increasing number of fanciers in the North, to whose credit may be ascribed a large measure of the progress that has been made. Not only by force of numbers, but by example and a strenuous advocacy, they have pressed forward the claims of poultry upon the attention of all.

To give their endeavours a more corporate bearing upon the industry, the fanciers within the counties of Aberdeen, Kincardine, and Banff formed themselves into a branch of the Poultry Club—a branch of over sixty members, having under its jurisdiction five affiliated societies.

This branch, while complying with the rules of the club, has taken up other matters not immediately within its scope; it has done much to help along the industry on its utility side. The branch was successful in inaugurating in Aberdeen the first public auction sale in the north of Scotland of pure-bred poultry. It was held in November last and was catalogued. The entry was large and the quality was exceptional; so much so that the Central Auction Company has decided to repeat

the event next autumn. Following upon this sale the Aberdeen Fat Stock Club, with commendable enterprise, added a poultry section to its annual exhibition, which was held just before Christmas. This feature was so satisfactory that the club has decided to renew it this year.

The first of the Agricultural Societies in Scotland to affiliate with the Poultry Club was the Royal Northern Agricultural Society, which holds two exhibitions at Aberdeen in the year, one in March the other in July. It promptly heralded the spirit of progress by affording a generous classification on modern lines with the requisite up-to-date appointments, and what before was a section little frequented by visitors is now the most largely patronised department of these exhibitions.

The fixture on March 10 last was the best ever held under its auspices both for numbers and quality. It was held under Poultry Club Rules. No less than 400 exhibits were staged, and of these 138 entries came from the yards of members of the branch of the Poultry Club for the Counties of Aberdeen, Kincardine, and Banff.

The management of this Agricultural Society is so excellent, and its financial resources are so ample and stable, that the wonder is why so few English fanciers exhibit at its shows. Surely they do not regard them as inevitable poultry Bannockburns? The reason must be that these excellent events are not known across the border for the inducements they offer to poultry-keepers of all grades. This year it was pleasing to note that such well-known fanciers as Mr. John Wharton and Mr. Thomas Abbot entered the lists, and, as might be expected, achieved conspicuous success. A hearty welcome is extended to all of their countrymen totry their prowess.

The Scotch fanciers of the North would not begrudge their success, though the tussle were to end in a poultry Flodden. The prize-money at these fixtures is satisfactory, and is paid irrespective of the number of entries in each class. In addition, the breed cups and medals of the Poultry Club and other valuable specials should be a decided attraction.

Mention must also be made of another gratifying feature in the forward movement. The assistance contributed by the poultry and the daily Press has been invaluable. The former is much more largely read than was wont, and the latter is devoting space to poultry articles which three years ago would have been regarded as space wasted, if, indeed, any notice was taken of poultry operations at all. The daily Press north of Dundee realised that there was a keen and growing demand for information on poultry culture, and promptly rose to the occasion with profit to the poultry industry and to themselves alike.

Last, but far from least, are the efforts of the Aberdeen Agricultural College. At various centres throughout its jurisdiction the college is at present carrying out a course of experiments in poultry-keeping. These are in accordance with a scheme framed and superintended by that experienced and well-known fancier and expert Mr. William Keys, late of Kintore, best known for his almost lifelong devotion to the Brown Leghorn. Like the Report of the Departmental Committee on poultry-keeping, the results of these experiments are being awaited with much eagerness.

While the outlook is bright, much requires yet to be done before poultry-keeping has been established as a profitable adjunct of agriculture on every holding in the north of Scotland. Let the cherished activities therefore to which reference has been made be maintained with increasing vigour.

#### By ALEX. M. PRAIN, J.P.

For the sake of those who still question whether poultry do or do not pay, I might give, by way of variety, an example from the extreme north shore of one of the bleakest and most exposed islands of the Orkney group. In this position of extreme exposure a small croft with poor buildings is rented by an old woman at £3 15s. per annum. She keeps about 100 hens, and received through the Co-operative Society, during the last two weeks of December, £2 9s. 1d. for thirty-seven dozens of eggs. In January, for fifty-three dozens, she received £2 19s. 8d., and in February, for ninety dozens, £3 13s. 1d.; the total for the two and a half months being £9 1s. 10d. off this poor croft. For feeding stuffs she paid £3 15s. 6d., and for small potatoes and light grain grown on the crost and fed to the hens she allowed £1-altogether £4 15s. 6d. for food—which gave her a clear return of £4 6s. 4d. Knowing the situation very well, I think the results most creditable. The whole of this island, which is not by any means large, benefited to the extent of £560 in hard cash during the first eight months of last year.

I suppose I am an optimist, but I see at no distant date these poorer places of our country enjoying a new era of prosperity when those in authority over us have recognised the necessity of putting proper technical teaching within the reach of the people. Should Scotland ever get a Department of Agriculture, which many consider essential for the development of agriculture, the poultry industry will surely be the first to benefit.

#### IRISH NOTES.

APRIL came in like the proverbial lamb, so that chicken-raisers were able to enjoy their work by way of compensation for the labour of the previous month.

We hear from many quarters that turkeys have only started to lay. This is no doubt owing to the exceptional severity of the weather. Heavy birds are likely to be scarce and dear in the autumn owing to late hatching.

Prices for spring chickens and old fowls are higher than usual. Dealers are paying 6s. 2d. per pair for chickens and 4s. for old hens. Poultry-keepers in the chicken-raising counties will be reaping a fine harvest.

The Cork Spring Show was one of the events of April. It is always a source of wonder that entries are not better at this fixture. This year, however, was better than previous years. The class for dead poultry was good in numbers but very poor in quality. The wording of the schedule must have been very faulty, as many of the exhibitors trussed for table instead of for market. The word is really rather ambiguous, and should have an explanation given, as is done in the Dairy Show and other schedules.

Miss C. G. Mercier, who has been teaching poultry-keeping in Counties Longford and Fermanagh, has gone to take up the post of dairy teacher to the County Down Committee of Agriculture. The committee are to be congratulated on their choice.

A very amusing incident happened some days ago with a well-known poultry-keeper. She advertised Light Sussex eggs at 3s. 6d. per doz., but by some error on the printer's part the advertisement appeared "turkey eggs" instead of "Light Sussex." Needless to say, she was inundated with letters during the following week, and she now says she had no idea there were so many bargain-hunters. One would-be buyer, on being told of the mistake, wrote: "All's well that ends well. Send on the Light Sussex!"

### NOTES FROM WALES.

BY A. T. JOHNSON.

THE unusually cold and wet March, which seriously checked the progress of the earlier lots of chickens, was followed by beautiful weather right up to Easter, and while rearers are generally complaining of an unsatisfactory season there seem to be, at the time of writing, better prospects in view. As predicted last month, the local supplies of market chickens at Easter

were practically non-existent. Some few live chickens changed hands in the open market at six shillings a couple, and that in the most rural parts of the North Eggs, too, that did not drop below fourteen for a shilling in early April increased in price again during the holiday week. There is a remarkable shortage of young birds, including ducklings, but those rearers who are more fortunate than others ought to have a good time of it at Whitsuntide.

Arrangements for the summer shows are well to the fore, and the chief events in the North will be Llandudno and Colwyn Bay, which occur on July 21 and 22 respectively. Such an effort is being made by the committees of these two shows that they are likely to eclipse all previous events in North Wales.

#### By T. R. EVANS.

Judging by the number of shows held during the past season, the poultry fancy must be on the up grade. Many of them could well hold their own with the majority of English events, both as regards numbers and the quality of the exhibits. The breeds mostly in

favour are Orpingtons and Wyandottes, and of the latter the Partridge appears to be ousting the Golds and Silvers. The majority of those who keep Partridges give them an excellent name as egg-producers, a remark that also applies to the Silver Pencilled variety. Minorcas and Leghorns also appear to have a strong hold in South Wales, and of the latter breed some first-class Browns and Whites were staged by local fanciers. Campines are also making great strides in the Radnorshire district; in fact, this breed is becoming the most popular one in the county, and is earning a good reputation as egg-producers. But beyond all question the most popular fowl in South Wales is the Old English Game, and fanciers of this breed are very numerous in the mining districts of Glamorganshire.

The Bedwellty Agricultural Society will hold its next show at Risca on Monday, September 6, and I hope it will prove as successful as the last show held at Blackwood. The society has done a great deal in the past to encourage farmers and cottagers in the district to go in for the breeding of high-class poultry, and at the last show there was a fine display of birds exhibited by cottagers.

## CLUBS AND SOCIETIES.

#### THE UTILITY POULTRY CLUB'S

TWELVE MONTHS' LAYING COMPETITION.

AFTER a long but unavoidable delay the accounts of the Twelve Months' Laying Competition have been made up and published.

The accounts show a total expenditure of £267 2s. 1d., and the receipts £248 2s. 8d., leaving a deficit of £18 19s. 5d Towards liquidating this deficit the Board of Agriculture and Fisheries have been pleased to make a second grant of £10 making their total contribution £35. Donations amounting to £12 6s. were received from Miss L. Coats, £55s.; Mr. F. Usher, £5; Mr. F. C. Dillon, £1 1s.; and Mrs. Hards, £1.

The official report was sent to every member of the Club, while over 1,000 copies were sent out in response to the Club's offer to supply copies on receipt of a stamped and addressed envelope.

The Competition aroused great interest, and nearly 800 Press cuttings were received, taken from all kinds of papers circulating in Great Britain and the colonies.

During the competition two inspections were made on behalf of the Board of Agriculture and Fisheries, and the grants were subsequently made.

It is interesting to note that in the Street Six Months' Competition, recently ended, the manager of the Twelve Months' Competition, Mr. E. W. Richardson, carried off the first prize, gold medal and championship cup, with his pen of Buff Plymouth Rocks; a hundred pens taking part in the Competition.

Below is given the official statement of receipts and expenditure.

C. G. MARTIN, Hon. Assist. Sec., 87, Crystal Palace-road, East Dulwich, S.E.

#### FIRST TWELVE MONTHS' LAYING COMPETITION.

STATEMENT OF RECEIPTS AND EXPENDITURE.

£ s. d.  20 entrance fees of £6  each
each
Board of Agriculture's grant         Rent of land         1 10 0           grant         25 0 0 Cost of food         49 18 1           Ditto supplemental         10 0 0 Prizes         7 0 0           Donations         12 6 0 Medals         12 17 0           Ditto from Press         1 2 6 Certificates         0 12 6           Eggs sold for market         66 16 5 Printing         22 13 3
grant         25         0         0         Cost of food         49         18         1           Ditto supplemental         10         0         Prizes         7         0         0           Donations         12         6         0         Medals         12         17         0           Ditto from Press         1         2         6         Certificates         0         12         6           Eggs sold for market         66         16         5         Printing         22         13         3
Ditto supplemental         10         0         Prizes         7         0         0           Donations         12         6         0         Medals         12         17         0           Ditto from Press         1         2         6         Certificates         0         12         6           Eggs sold for market         66         16         5         Printing         22         13         3
Donations         12 6 0 Medals         12 17 0           Ditto from Press         1 2 6 Certificates         0 12 6           Eggs sold for market         66 16 5 Printing         22 13 3
Ditto from Press         1         2         6         Certificates         0         12         6           Eggs sold for market         66         16         5         Printing         22         13         3
Eggs sold for market 66 16 5 Printing 22 13 3
Eggs sold to competitors Typewriting 10 9 3
for sittings 6 8 5 Postages and stationery 11 10 6
Sale of reports 3 11 6 Press cuttings 2 2 0
Sale of tickets of admis- Vice President's clerical
sion to view 0 5 0 assistance 6 0 0
Fines 1 1 5 Fares to Rayne I 8 0
Packing and dispatch of Packing and dispatch of
si tings £8 2 6 sittings 8 2 6
Less irrecover- Extra wire netting and
able 0 14 5 7 8 1 pen doors 13 10 10
Sale of wire netting and Carriage on empties 0 10 2
Balance being deficit 8 19 5
Tetal 0267 2 1 Tetal 0267 2 1
Total£267 2 1 Total£267 2 1

#### The Poultry Club.

At the March meeting of the council a number of new members were elected, and six local societies were affiliated to the club.

A 10-guinea cup was offered by Mr. W. M. Bell, to be competed for at the same show as the club's annual trophies, for the best bird in the show exhibited by a

member of the club who has joined during the current year. The council passed a hearty vote of thanks to Mr. Bell for his generosity.

Specimens of the Poultry Club marking ring were produced by the hon, secretary and approved by the council. It was decided that they be issued on or after March 31, and that a circular be sent to every member of the club, giving particulars of sizes, price, &c. It was resolved to issue the ring to non-members who apply for it.

#### Royal Agricultural Show at Gloucester.

The Royal Agricultural Society of England has now issued the prize-sheet for live stock, poultry, produce, implements, &c., at the Show of the Society to be held at Gloucester from Tuesday, June 22, to Saturday, June 26. The total value of the prizes offered (inclusive of champion prizes, special prizes, and medals) is £9,675 18s. Prizes amounting to £212 13s. will also be given for useful descriptions of poultry, including table fowls, ducks, geese, and turkeys. Entries of poultry must be made by Monday, May 31, 1909. All applications must be addressed to the Secretary at 16, Bedfordsquare, London, W.C., and intending exhibitors are advised to make early application for the necessary entry forms.

#### TRADE NOTICES.

Great Southern and Western Railway.

The "Sunnyside of Ireland," which includes the Kingdom of Kerry and the neighbouring counties of Cork, Limerick, and Clare, is described in a pretty little booklet issued by this company, whose system affords many facilities of access thereto. A pleasant itinerary for a tour round and about the Lakes of Killarney and further afield is here set forth, accompanied by dainty photographic blocks and embellished with emerald-green ornament. The booklet, which may be obtained at bookstalls, or post free from the Superintendent of the Line, Kingsbridge Station, Dublin, for one shilling, will be found very useful by intending visitors to the capital and the South and West of Erin.

#### A Useful List.

Exhibitors of poultry and prize pigeons, as well as dog fanciers, should make a point of securing the list of 1909 shows issued by the London and North-Western Railway, to and from which they especially convey, with their usual expedition and care, dog and poultry traffic. It is possible from this list to make one's plans for a whole season of shows, so exhaustive and accurate is the list of dates and secretaries' names and addresses.

#### The Westmeria Breeding=Pen.

Utility and handsome appearance are claimed for this appliance—with justice, according to the registered design and the prospectus descriptive of its points. The pen is divided into two compartments, the larger of which can be used either as a shelter in hot or rough weather, or, if littered, as a scratching-shed. The other compartment is for roosting and laying, and contains a step to enable heavy birds to enter the nest-boxes or reach the perches without hurting themselves. Ventilation is secured by sliding canvas shutters on the front of this compartment. The four wide-opening doors,

### **CYPHERS** STANDARD INCUBATORS.

Known the world over as the Standard Hatching Machines.



Have up-to-date everv feature known to artificial incubation. In fact, they are built to suit the Practical Poultryman.

### **CYPHERS** FOSTER MOTHERS.

The Unequalled Chicken Rearers.

Three separate compartments, well ventilated, well lighted, roomy and comfortable for the chickens, convenient, durable, and successful for the operator.



Special Illustrated Catalogue No. 7 Post Free.

#### CYPHERS INCUBATOR COMPANY.

119-125, Finsbury Pavement, LONDON, E.C.

## PRESTON HALL POULTRY FARM,

AYLESFORD, KENT.

having 1,500 eggs in incubators, can now supply sittings of eggs per return from exhibition and utility pens of—

**BLACK LEGHORNS** SALMON FAVEROLLES BUFF **BLACK LANGSHANS** WHITE YOKOHAMAS **BROWN** WHITE PILE 5/- per doz. **DUCKWING** AYLESBURY DUCKS 3/- per doz. PEKIN ROUEN

WHITE WYANDOTTES INDIAN RUNNERS .. PARTRIDGE EAST INDIAN **BUFF ORPINGTONS** 4/- per doz. WHITE ORPINGTONS

Unfertiles replaced.

All eggs are from the same pens I am breeding from myself, but are reduced in price in order to give everyone a chance of obtaining the best and genuine sittings of eggs from the above breeds. Illustrated Catalogue post free.

Inspection of Farm cordially invited.

Vacancy for a Pupil.

Address-

J. FRYER, Manager

which open practically the whole front of the pen, are a new idea in construction.

#### Messrs. Finch and Fleming,

Of Pulloxhill, Ampthill, Beds, send us their catalogue of Prairie State Incubators and other poultry requisites. Although this is the firm's first catalogue, the two principals desire to point out that they are not "new hands," since for the past two years they have acted as joint managers of the Poultry Outfit Company. The principle and construction of the "New" Prairie State Incubators are described at some length, and information is given as to the "Colony Brooder" and many other applances produced by the firm. Particular mention is made of the fact that the various appliances and foods advertised have been in daily use on the large poultry farm owned by the proprietors. booklet is amply illustrated.

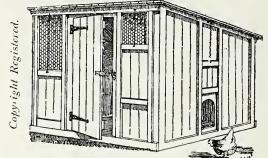
#### Messrs. Pearce, Pither, and Co.

Our attention is drawn to some strong points of the Self-filling Water Trough made by this firm. It is a labour-saving contrivance in that it does away with the daily filling and cleaning of the water vessels; and, as the water does not remain long enough in the tank to become stagnant, the danger of disease from this source is very much diminished. The water is stored in an airtight chamber which keeps it fresh and pure. Should the outside water get dirty or impure, it can be thrown away; in any case, it does not affect the purity of the water in the inside tank. The trough is made in two sizes, and the directions for its use appear to be simple. Full particulars will be sent on receipt of a postcard to Messrs. Pearce, Pither, and Co., Romsey, Hants.

## J. T. HOBSON & CO., BEDFORD,

Makers of High-Class Poultry Houses at Popular Prices, that will last a lifetime, supplied direct to the Public, saving the Middleman's Profit. that will last

## THE "SOVEREIGN" POULTRY PEN.



Absolutely the Best Value in England. Competition defied.

Size—6 feet long, 4 feet wide, 4 feet high.

This House is constructed of Best Quality Red Deal Boards (practically without knots), planed, tongued, and V-jointed by our machinery on stout framing, made in sections, easily erected, and fitted with ventilating Shutters, door, perches, slide, lock and key, and 4 iron handles for moving. 4 iron handles for moving.

Cash with order.

4 iron handles for moving.

Cash with order.

Orders for 3 or more Price 19/- each.

If treated with preservative "Creosoleum" 1/- extra.

Carriage Paid to any Station England or Wales.

Intending purchasers should beware of houses offered made of Foreign White Matching, that will not stand the weather, and soon become useless. Large Catalogue and Book of Testimonials, 1d. Stamp.

#### T. HOBSON & CO., Importers, Portable Wood Building Specialists,

Established 65 years.

BEDFORD. Stock of Wood in Sheds, 10,000 tons.

Works, 6 acres.
Telegrams: "TIMBER, BEDFORD." Inspection Invited.

Telephone No. 34

## THE TWELVE MONTHS' LAYING COMPETITION

(Organised by the Utility Poultry Club) has once more demonstrated the fact that our LAYING STRAINS are the BEST OBTAINABLE.

In the above Competition our entry of White Wyandottes obtained First Prize, Gold Medal, and First-Class Certificate of the Club, whilst our Buff Rocks obtained Silver Medal and Second-Class Certificate, also our strain of White Leghorns obtained a similar honour.

Further, 25 per cent. of our winners laid over 200 eggs each, obtaining the three highest scores in the Competition—viz., Buff Rocks 216 eggs, White Wyandottes 213 eggs, and Buff Rocks 206 eggs, whilst all the other competitors together only produced two birds to exceed 200 eggs each.

As a further object-lesson our White Wyandottes laid eggs worth 16/8 per bird at wholesale prices, while the bottom pen only produced eggs worth 7/4 per bird.

Mr. Nicholson writes, January 30, 1909: "One Pullet (White Wyandotte) from a sitting of yours laid from October 1, 1907, to October 29, 1908, 262 eggs."

Mr. STANLEY WILKIN, Tiptree, Essex, writes, January, 1909: "I can bear witness to your laying strain. Three pullets from your eggs laid 226, 226, and 235 eggs in a year, and another laid 185 in nine months and a week. My best layers this autumn have laid 85 to 95 eggs in four months, and are the daughters of a 212-egg hen sired by your cock.'

BREEDS: WHITE, SILVER, AND PARTRIDGE WYANDOTTES, BUFF AND WHITE ORPINGTONS, BUFF AND BARRED ROCKS, FAVEROLLES, WHITE AND BLACK LEGHORNS, MINORCAS, ANCONAS, HOUDANS, AYLESBURY AND RUNNER DUCKS.

EGGS: No. 1 Pens, 7/6 per dozen; No. 2 Pens, 5/- per dozen.

1909 Catalogue will be forwarded with pleasure upon receipt of a P.C.

WORCESTERSHIRE POULTRY FARM, NEAR BROMSGROVE.

#### Mr. and Mrs. P. T. Pyne,

Of Ravenscar, Yorks, who are well known in the poultry world as advocates of the recording nest system, send us their catalogue of specialised breeds of poultry, appliances, foods, &c. White and Buff Orpingtons and White and Black Leghorns figure prominently among the first-named, and of course "Pyne's Trap-Nests" are a conspicuous feature among the several appliances. In connection with the latter Mr. Pyne has designed a Recording Nest Sheet, which has been used at many of the big Laying Competitions. Ravenscar is an extremely exposed spot on the Yorkshire coast, and the success of the Pynes as utility breeders of vigorous birds is one of the latter-day triumphs of expert management.

#### North-Eastern Railway.

The 1909 list of "Furnished Lodgings, Hotels, &c.," issued by the North-Eastern Railway Company is specially designed for holiday-makers, but will be found extremely useful by all who travel on the Company's system for any purpose whatever. The counties tapped by this system are Northumberland, Cumberland, Westmorland (including the Lake District), Durham, and Yorkshire, and the tabulated list of boarding-houses and private lodgings obtainable in country farms and seaside town houses, and of hotels, occupies close on a hundred pages. Every information, including that relating to such important matters as distance from station and bathroom accommodation, will be found within this comprehensive guide, but any further particulars will gladly be furnished by the Chief Passenger Agent at York gratuitously upon application.

#### "Quality Hill Poultry Yards," Illinois, U.S.A.

We have received the first annual catalogue of this concern, which is the joint enterprise of Messrs. F. A. and W. Z Bennett, both or whom have gained reputations in the States: the one as a specialist breeder of S.C. Rhode Island Reds and the other as a specialist in Barred Plymouth Rocks. These brothers originally took up poultry as a hobby, and the present combination is one of the several instances in which the hobby has developed into an extensive and serious business. The catalogue is finely printed and illustrated. It contains among much other information a formidable array of testimonials and Press notices.

#### White Leghorn Poultry Yards Co., Waterville, New York.

"This is the Story of our Reaching the Point where we can, and the Reason why we can Please you at 4.00dols. per 100." Such is the little inscription that one finds on the front cover of the pamphlet, "Single Comb White Leghorns for Profit," compiled by Mr. C. T. Hatch, the managing owner of the above concern, the price quoted being that for a hundred ergs for setting. The "story" being that for a hundred eggs for setting. The "story" itself is piquant in style, very illuminating as to

HAVE YOU SEEN Pither & Pearce's Self-Filling

## Water Fountain

For Game and Poultry? Provisionally Protected.

Provisionally Protected. Patent applied for.

A New Principle. Nothing Else Like
It. The Only Hygienic Water Vessel
Obtainable.

Water bottled up in separate inside chamber, which is airtight, fills and empties itself, leaving only a small quantity of water exposed.

NO STAGNATION OR EVAPORATION.
Can be cleaned without wasting good water in inside tank.

If outside water gets dirty or impure, it can be got rid of, and does not in any way affect purity of WATER in INSIDE TANK.

Filled once will last a week, and fresh

Filled once will last a week, and fresh water every day if required.
A GREAT SAVING OF LABOUR.

The Field, March 6, says: "It is materially different from anything of the kind hitherto put on the market, and from an hygienic point of view IS WITHOUT A RIVAL."

Gallon size, 6/- each; half-gallon, 3/- each.

Sent by post for 6d. extra.

PEARCE, PITHER, & CO., ROMSEY, HANTS.

## ROYAL



SHOW.

## GLOUCESTER, June 22 to 26, 1909.

70th ANNUAL EXHIBITION of Horses, Cattle, Sheep, Pigs, Poultry and Farm Produce; Jumping, Horse-Shoeing and Butter-Making Competitions; Agricultural Education, Forestry, and Horticulture.

#### DATES OF CLOSING OF ENTRIES.

Horses, Cattle, Sheep, Pigs, Cider,

and Perry

May 20

Poultry and Dairy Produce, Horse-Shoeing and Butter-Making

May 31

Entries for Jumping close during the Show.

Prize-sheets and Entry Forms will be forwarded on application to

THOMAS McROW, Secretary.

Royal Agricultural Society of England,

16, Bedford-square, London, W.C.

Competitions

## The J.M.D. Challenge. $\otimes$ FOSTER-MOTHER.

### THE J.M.D. PATENT TREBLE-FLUED INCUBATOR.

Well made, reliable, giving pure atmosphere and unvarying exactitude of temperature. 50-egg, 67.6; 100-egg, 80'-. J.M.D. Challenge Foster-Mother, scientific, ventilated to perfection, free from fumes, &c., 37.6 carriage paid. Send a p.-c. for our Handsome Illustrated Catalogue, it will well repay you.

J.M.D. POULTRY APPLIANCE CO. (Dept. P. R.), BLACKBURN.



American methods on a big poultry plant, and generously full of sound advice. Some good half-tone blocks accompany the text, which, through being more than ordinarily readable, is very good advertising.

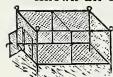
#### Mr. W. H. Cook's Exports.

During the past few weeks Mr. William H. Cook, of the Model Poultry Farm, St. Paul's Cray, Kent, has exported the following poultry: Fourteen Aylesbury ducks to the Punjab; a White Wyandotte cockerel to Norsteinke, Germany; ten Buff Orpingtons, four Black Orpingtons, one White and one Spangled Orpingtons cockerels to New Jersey; six Blue Orpington ducks to Noisy-le-Grand, France; ten Blue Orpington ducks and a pen of Buff Orpington fowls to St. Cry-s-Boine, France; two Barred Rock cockerels to South America; a cockerel and three pullets of Black and White Orpingtons to South America; two White Orpington cockerels to Somme, France: an exhibition White Orpington pullet to Brussels; a White Orpington cockerel and three pullets to Madras; twelve Aylesbury ducks to Nepal, viâ Calcutta; a Light Brahma cockerel and three pullets to Brazil, per ss. Danube; a very fine Cuckoo Orpington cockerel to France; three White Orpington and four Buff Orpington cocks and three hens to Paris; White Orpington cock and two Black Orpington hens to Liege, Belgium; whilst several hundreds of eggs have been sent to all parts of the Continent and the United States. Mr. Cook reports a most excellent hatching season, having at the time of writing close on 3,000 chickens hatched from January 3. Eggs have proved most fertile, and have yielded a large percentage of strong chickens in spite of so many changes in the weather. The photograph that appeared of a brooder house in the April issue, on page 440, was taken at Mr. Cook's farm at St. Paul's Cray.

#### Mr. W. Tamlin's Exports.

The following is a list of Mr. Tanılin's exports for the month of March, 1909: Thirty 100 incubators, twenty-five 60 incubators, twelve 100 foster-mothers, ten 60 foster-mothers, to Mr. Fletcher Bradley, Canada, per ss. Montezuma; five 30 "Ostrich" incubators, to Cape Town, South Africa, to order, per ss. Port Salisbury; two 100 incubators, one 100 foster-mother, to Santiago, per order of Allardyce and Co.; two 100 incubators, one 100 foster-mother, to E. W. Pidgeon and Co., per ss. Indraghiri (order of Mr. Lewis); one 100 Sunbeam foster-mother, to Mr. L. Gourmez, France; twenty-five 100 incubators, eight 100 foster-mothers, to M. A. Nasson, France; one 60 incubator, one 60 foster-mother, to Captain Falkner, Bermuda; one 60 foster-mother, to Captain Falkner, Bermuda; one 100 incubator, one 100 foster-mother, to Baron Crombrugghe, Belgium; two 100 incubators, four 60 incubators, to Mr. J. F. Marshall, South Africa; two 100 incubators, to Julian Stephens, Ltd., South Africa, per ss. Goth.

## WICKS BROS.' FAMOUS COLLAPSIBLE IMPROVED FOLDING WIRE RUNS. Known all over the World.



Used by all the leading Fanciers of the day, at home and abroad, and thousands of bonā-fide unsolicited testimonials received annually from delighted purchasers.

Can be fixed and packed away momentarily. Folds quite flat, therefore occupying a very small space when not in use. Can be moved to fresh ground daily if required. Will last a lifetime if used in an ordinary way. Is cheaper and stronger than any Run yet placed upon the market. Can be fixed against Dog Kennels, Fowl Houses, Pigeonries, Aviaries, Rabbit Hutches, &c. Catalogue Free.

WICKS BROS., NORWICH, ENGLAND. These Runs will Last a Lifetime!!

#### ALL UNHATCHED REPLACED ONCE.

WHITE, JUBILEE, Black and Buff Orpingtons, White, Silver, Black, Pencilled and Partridge Wyandottes, Black, Brown, and White Leghorns, Minorcas, Barred Rocks,

3/-

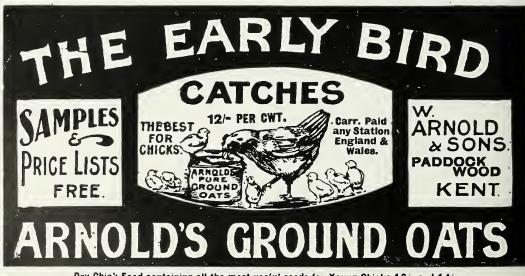
Nearly 1,000 Cups, Prizes, and other Honours taken during the last 4 years.

Birds quoted by return. Eggs from better pens of a few varieties at 6/- sitting.

J. HERBERT VAUX, ROOKERY

ROOKERY POULTRY FARM, DOVERCOURT (UPPER).

When answering Advertisements please mention THE ILLUSTRATED POULTRY RECORD.



Dry Chick Focd containing all the most useful seeds for Young Chicks 12/- and 14/-per cwt. 60 years' experience has taught us what the chicken rearer needs.